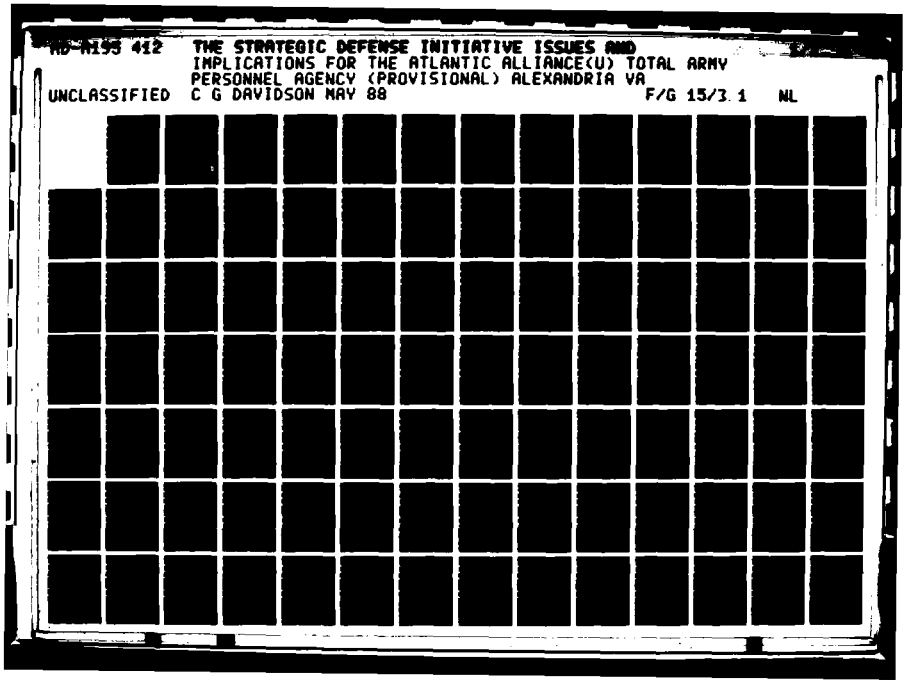
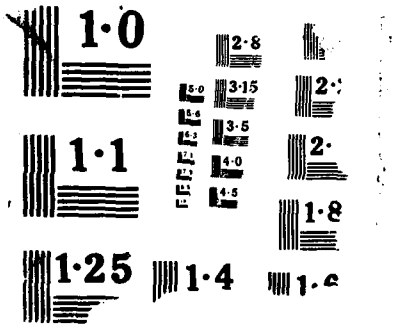

AD-A193 412 THE STRATEGIC DEFENSE INITIATIVE ISSUES AND
IMPLICATIONS FOR THE ATLANTIC ALLIANCE(U) TOTAL ARMY
PERSONNEL AGENCY (PROVISIONAL) ALEXANDRIA VA
UNCLASSIFIED C G DAVIDSON MAY 88 F/G 15/3.1 NL


1·0
1·1
1·25
1·4
2·8
3·15
3·5
4·0
4·5
2·
1·8

DTIC FILE COPY

AD-A195 412 DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

UNCLASSIFIED

1b. RESTRICTIVE MARKINGS

2a. SECURITY CLASSIFICATION AUTHORITY

3. DISTRIBUTION/AVAILABILITY OF REPORT

2b. DECLASSIFICATION/DOWNGRADING SCHEDULE

APPROVED FOR PUBLIC RELEASE: DIST. UNLIMITED

4. PERFORMING ORGANIZATION REPORT NUMBER(S)

5. MONITORING ORGANIZATION REPORT NUMBER(S)

6a. NAME OF PERFORMING ORGANIZATION: HQDA, TAPA

6b. OFFICE SYMBOL (If applicable): (DAPC-OPA-E)

7a. NAME OF MONITORING ORGANIZATION

6c. ADDRESS (City, State, and ZIP Code):
MAJ Charles G. Davidson
HHC, 130th Engineer Brigade
APO Newyork 09165-0971

7b. ADDRESS (City, State, and ZIP Code)

8a. NAME OF FUNDING/SPONSORING ORGANIZATION: HQDA, TAPA

8b. OFFICE SYMBOL (If applicable)

9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER

8c. ADDRESS (City, State, and ZIP Code):
200 Stovall St.
Alexandria, VA 22322

10. SOURCE OF FUNDING NUMBERS

PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.

11. TITLE (Include Security Classification)
The STRATEGIC DEFENSE INITIATIVE: ISSUES AND IMPLICATIONS FOR THE ATLANTIC ALLIANCE

12. PERSONAL AUTHOR(S)
MAJ Charles G. Davidson

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT
Final	FROM _____ TO _____	8805	99

16. SUPPLEMENTARY NOTATION
Prepared as Masters Thesis in the Dept of West European Studies, Indiana University

17. COSATI CODES		
FIELD	GROUP	SUB-GROUP

18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
Strategic Defense Initiative, Western Europe, Technology transfer

19. ABSTRACT (Continue on reverse if necessary and identify by block number)
An analysis of the arguments exchanged between the US and Western European nations since the announcement of the SDI program, showing that the importance of the SDI for Europe lies in the descussion of European security it has brought forth as opposed to the undefined strategic concept behind it or in the nature of the research to attain it.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT
☐ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT. ☐ DTIC USERS

21. ABSTRACT SECURITY CLASSIFICATION

22a. NAME OF RESPONSIBLE INDIVIDUAL

22b. TELEPHONE (Include Area Code)

22c. OFFICE SYMBOL

DD Form 1473, JUN 86 Previous editions are obsolete. SECURITY CLASSIFICATION OF THIS PAGE

THE STRATEGIC DEFENSE INITIATIVE: ISSUES AND IMPLICATIONS FOR THE WESTERN ALLIANCE

CHARLES G. DAVIDSON, O-4
HQDA, TAPA (DAPC-OPA-E)
200 Stovall St.
Alexandria, VA 22332

Final Report, May 1988

Approved for Public Release; Distribution unlimited

A thesis submitted to Indiana Univesity, Bloomington, Indiana, in partial fulfillment of the requirements of the degree of Master of Arts.

THE STRATEGIC DEFENSE INITIATIVE: ISSUES AND IMPLICATIONS FOR THE WESTERN ALLIANCE

MAJ Charles G. Davidson

Submitted to the faculty of the Graduate School
in partial fulfillment of the requirements of the degree

Master of Arts

in the Department of West European Studies
Indiana University

May, 1988

Accepted by the Graduate Faculty, Indiana University, in partial fulfillment of the requirements of the degree, Master of Arts.

Norman Furniss, Ph.D.
Chairman

Masters
Committee

Alfred Diamant, Ph.D.

John Lovell, Ph.D.

DEDICATION

This thesis is dedicated to Major Arthur D. Nicholson, Jr., United States Army, who was fatally wounded by the Soviets in East Germany on 24 March 1985. At the time of his death, Nick was serving in the line of duty as a Tour Officer with the United States Military Liaison Mission, Berlin/Potsdam.

Nick's inspiration and guidance were instrumental in my decision to enter the Foreign Area Officer Specialty.

He will always be remembered as the *Benchmark* FAO by those who knew and/or served with him.

ACKNOWLEDGEMENTS

The most important acknowledgement goes to my wife, Sue and daughters, Laurel and Amy. Their understanding and cooperation have made life as a husband, father, student and soldier manageable during our short, but most enjoyable tour of duty in Bloomington, Indiana.

A special acknowledgement and thanks goes to Professor Norman Furniss for all his valued assistance and guidance as my thesis committee chairman and as a mentor throughout my brief tenure at Indiana University.

Finally, I would like to honor Connie Young and Mary Lake for their friendship, thoughtfulness, and prompt assistance when required as West European Studies department secretaries.

TABLE OF CONTENTS

INTRODUCTION

On March 23, 1983, President Reagan officially launched the Strategic Defense Initiative in a television address to the American public entitled "Peace and National Security." Over four years have passed since that historic announcement and the resulting debate has afforded the United States an unprecedented opportunity to capitalize on a fundamental development in strategic weapons technology. During the dawn of the nuclear age, technological advances in the area of strategic weapons evolved at a pace faster than the United States policy makers could assimilate their implications for national strategy. The evolution of the atomic and hydrogen bombs in the mid-forties,during the course of World War II, preceded serious debate on the long-term impact of nuclear weapons upon peace and conflict. Consequently, during the 50s and 60s, the United States engaged in a continuous debate over the role of nuclear weapons in the nation's national strategy. Today, the United States is in a position with the Strategic Defense Initiative that allows for the opportunity to engage in strategic re-thinking, re-evaluation and re-development of doctrine that would make the SDI an integral part of long-range strategic strategy.

The Strategic Defense Initiative and its implications for the Western Alliance's strategic strategy have been the focus of debate within NATO since President Reagan's speech

announcing the concept. European concerns about SDI are understandable and justified. Any change in U.S. strategic nuclear policy, or in the overall U.S.-Soviet strategic relationship, will inevitably affect the Alliance since European security relies on the nuclear threat, given that conventional defense has long been considered insufficient. The allies prefer the certainties of the status quo of the past forty years to the uncertainties of gradually shifting to a new security model based on defense. The Euro-American debate on the SDI has inherently been affected by this strategic perspective.

The relationship between defense and deterrence is at the center of Western strategy, and nowhere is that relationship so decisive as within the Atlantic Alliance. Since the development of the strategy of flexible response during the 1960s, that relationship has become the center of Euro-American misunderstanding on strategic matters. The SDI issue is therefore, the latest phase in a long-standing and continuous debate. To establish that the debate on the relationship between defense and deterrence is as old as the bomb itself does not minimize the differences between the United States and its Alliance partners. It merely recognizes that there are different strategic concerns on both continents.

The purpose of this thesis is to examine the arguments exchanged between the United States and Europe since the official announcement of the SDI by President Reagan on March

23, 1983. The strength of these arguments is less important than the strategic interests they reflect. Those points of convergence and divergence on strategic matters will be reviewed and examined. It will be shown that the importance of the SDI for Europe lies in the discussion of European security that it has brought forth as opposed to the undefined strategic concept behind it or in the nature of the research to attain it.

It is the opinion of this Officer that the United States should emphasize how defensive systems can strengthen military stability, increase the possibility of genuine arms reduction, and provide spin-off technologies for use within the Alliance's civilian economic sector. Further, the U.S. should emphasize that a judiciously managed strategic defense at the political level can improve alliance solidarity because the reduced vulnerability of the continental United States would enhance the credibility of our strategic guarantee to Europe. The hypothesis here is that a protected American homeland would increase the likelihood that the U.S. actually would respond to a soviet assault on Western Europe in the manner prescribed by NATO's flexible response strategy.

The framework of this thesis will consist of three separate, but interrelated sections. The first section will review and examine the historical evolution of defense in a nuclear era, and the bounds of agreement between the Americans and Europeans. It will be demonstrated that the

debate over the SDI does have a historical foundation, but with new parameters, most apparent in the elimination of a strategic policy of nuclear deterrence founded on retaliation.

The second section will review and examine the particulars of the current Euro-American debate on the SDI. The transatlantic exchanges of the past four years will be reviewed along with a discussion of the responses to European concerns.

The final section will examine the politics of the SDI debate and some potential consequences to the Euro-American relationship. Intraeuropean relations will be reviewed as well as those of the international transatlantic Alliance.

SECTION I EVOLUTION OF DEFENSE IN A NUCLEAR ERA

President Truman's decision to drop atomic bombs on Hiroshima and Nagasaki in August, 1945 was a highly controversial one. Some argued his decision was appropriate and necessary to end the war and to save American lives and likewise, ultimately, those of Japanese. Others maintained that Japan was near defeat and that the atomic bombs were actually used to intimidate the Soviet Union. The "WHY" of President Truman's decision is not the essence of this discussion. The results, however, profoundly altered the traditional uses of military power. A new school of thought emerged, concerned with developing a strategy for the proper use or nonuse of these new weapons spawned by the Manhattan Project.

Bernard Brodie, in 1946, argued that the role of military force had fundamentally changed. Before 1945, military force was intended to fight wars; *now*, the role of the military with atomic weapons would be to prevent wars. The concept of nuclear deterrence was thus born seeking to deter aggression by the threat of unacceptable damage to the aggressor. Brodie further argued that the atomic bomb would render traditional defense-attack strategy obsolete and that "no adequate defense against the bomb exists, and the possibilities of its existence in the future are exceedingly remote."[1] Brodie's argument precipitated an evolution of

American strategic theory, especially with the unexpected detonation in 1949 of the Soviet Union's first atomic bomb. The Soviet's attainment of nuclear status meant that the continental United States might be vulnerable in the foreseeable future to a Soviet attack. Even though the United States was superior both quantitatively and qualitatively in the possession of nuclear weapons, that superiority could not guarantee security. Americans were forced to assess the problem against potential homeland vulnerability threatened by a weapon of which the prospects for an effective defense were next to nil. Defensive options were primarily developed to defend against the enormous destructive power of the atomic bomb.

Strategic thinkers formulated four principal methods of defense for the nuclear age during the Eisenhower years. The first method was that of an active defense against a Soviet attack. Soviet offensive capability improved immensely in the mid-50s with the deployment of their long-range bombers. The United States reacted to this Soviet threat with the initiation of an extensive air defense program. Americans were forced to analyze the possible Soviet progress in the arena of inter-continental ballistic missiles. Two key national reports issued within two years of each other evaluated strategic defense potential against nuclear weapons. The Killian report argued in February, 1955 that joint superpower deployment of ICBMs would result in mutual vulnerability and, therefore, nuclear stalemate. It further

argued that future advances in technology would not enhance or change this stalemate.[2] The Gaither report issued two years later provided an interpretation somewhat contrary to the Killian report with regard to the chances of defending against an ICBM attack. The Gaither report did not exclude the possibility that future improvements in the means of detection and interception of ballistic missiles might lead to a permanent race between attack and defense;

> The missiles in turn will be more sophisticated to avoid destruction; and there will be a continuing race between the offense and the defense. Neither side can afford to lag or fail to match the other's efforts. There will be no end to the technical moves or countermoves.[3]

The Gaither report, although enlightening, did not alter the national notion that the ballistic missile was the supreme element of attack against which there was no foreseeable defense.

Preemptive attack or first-strike capability was the second method of nuclear defense contemplated by strategic planners. The strategy here was to destroy enemy missiles before they are launched since there was no effective defense against a launched ICBM.[4] The debate as to whether this is an offensive or defensive action remains an argument today. Nonetheless, the first-strike strategy did stimulate thought on how to defend against Soviet preemptive strikes.

The third method of nuclear defense evaluated was the passive defense of the United States second-strike

capability. The vulnerability of American bomber bases to a preemptive Soviet first-strike endangered U.S. retaliatory potential and weakened strategic stability by providing the Soviets an incentive to launch a first-strike. Defending these bombers was determined to be the best method of deterring a Soviet preemptive attack. It was argued that maintaining an assured second-strike capability would reduce the pressure to preempt.

Passively defending American bombers was a task with limited options. It was impractical and uneconomical to use multibasing, so the most common method of passive defense was to keep part of the U.S. bomber force on active alert with some aircraft actually in the air.[5] The passive defense concept ultimately reinforced and enhanced the preference for and development of the mobile Polaris submarine.

Defending the American population against Soviet preemptive attack became the fourth method of nuclear defense formulated by strategic thinkers. Experts like Herman Kahn, physicist turned strategist, advocated an intense civil defense program.[6] There were basically two approaches to civil defense in the U.S.: shelters and evacuation. Both were intended to assist the civilian population in surviving a nuclear war. The notion of civil defense in itself became the topic of intense debate between supporters and opponents. Ultimately, the opponent's argument, based on the physics and

costs of protecting population centers, took precedence and American civil defense efforts remained little more than symbolic.[7]

GETTING TO MAD

John F. Kennedy took the oath of President on January 20, 1961. With the beginning of his Presidency also began the longest tenure ever of a Secretary of Defense. Robert McNamara initiated a reexamination of American strategic doctrine that concluded that the balance between American and Soviet forces led to a stalemate which could not be broken by any foreseeable technological advancement.

The policy of mutual assured destruction (MAD) was developed only after a thorough debate over the defense options inherited from the Eisenhower Administration. The Kennedy policy makers first reconsidered a counterforce strategy; then the development of active defenses; and, finally, a strategy for restricting damage in combination with an extensive civil defense program. The doctrine of MAD was officially adopted after a thorough review of the aforementioned options was accomplished, thereby acknowledging the difficulty of avoiding mutual vulnerability or limiting its effects.

The first option studied by McNamara was that of a counterforce strategy. In his now famous Ann Arbor address

of June 1962, McNamara argued for targeting enemy forces rather than populations, the so-called no-cities doctrine.

> The United States has come to the conclusion that to the extent feasible, basic military strategy in nuclear war should be approached in much the same way that more conventional military operations have been regarded in the past...That is to say, our principal military objective in the event of nuclear war...should be the destruction of the enemy's military forces. Specifically, our studies indicate that a strategy which targets nuclear forces only against cities or a mixture of civil and military targets has serious limitations for the purpose of deterrence and for the conduct of general nuclear war.[8]

This speech clearly postulated the possibility of a preemptive first-strike. McNamara defended himself against this warmonger interpretation by defining the possibility of a *counterforce* strike only in response to air attack by the Soviets, which rejected the notion of a U.S. first-strike.[9] McNamara's interest in the counterforce strategy was limited, but one spin-off of the debate over its usefulness was the aim of damage limitation.

The aim of damage limitation, the second defensive option reviewed by the Kennedy Administration, was to reduce the destruction to American society resulting from a nuclear conflict. Damage limitation was linked to the no-cities doctrine in that its aim was to persuade the Soviet Union not to attack civilian populations. Within these parameters, civil defense became a more viable alternative. In the event of counterforce strikes against the U.S., the major

consequence to the civilian population would be nuclear fallout, which could be limited by the use of fallout shelters.

The no-cities doctrine was and still is subject to at least two criticisms. First, it is highly unlikely that the Soviets would adhere to a hands-off policy prescribed by the no-cities doctrine and second, the physics of a nuclear explosion and close proximity of many American cities to military targets lead to serious misgivings on the effectiveness of damage limitation or civil defense. The arguments for civil defense deteriorated and by late 1963 McNamara became convinced that damage limitation was not feasible at any reasonable cost and that U.S. efforts to achieve this objective would result in no net increase in U.S. national security. Therefore, damage limitation was largely abandoned as a declared policy in the latter half of the 1960s, as was McNamara's support for a continued expansion of U.S. counterforce capability.[10]

Anti-ballistic missile (ABM) defense was the third defensive option reexamined by the Kennedy Administration. The first ABM system proposed for the United States was the Nike-Zeus, an upgraded version of the old Nike-Ajax. The Nike-Zeus was designed to intercept the first generation of Soviet ICBMs in the late 1950s. Technically, it was determined that this system was incapable of distinguishing between decoys and nuclear missiles which made the cost of Soviet countermeasures much less expensive than missile

interception.[11] A new version, the Nike-X, was developed in 1963. It consisted of a two-tiered system of long and short-range rockets. Long-range rockets were to intercept incoming ICBMs during their stratospheric glide phase while the short-range rockets intercepted any remaining warheads that reentered the atmosphere. The remaining problem of distinguishing real missiles from decoys combined with a shift of emphasis and policy towards the doctrine of MAD resulted in a decision not to deploy the Nike system and to reduce the magnitude of ABM research programs.[12]

Continued ABM research disclosed that ABM systems were indeed technically feasible, but the Kennedy Administration had previously rejected the aim of damage limitation for the strategic concept of MAD. ABM systems became an undesirable option because they appeared as potentially destabilizing.

ENTER MAD

U.S. attitudes toward civil defense and strategic defense have been for the most part determined largely by the nuclear doctrine that has dominated U.S. strategic thinking for the past two decades, that is, mutual assured destruction (MAD). According to this doctrine, nuclear aggression by any nation is deterred by the threat of overwhelming retaliation that will punish the aggressor with unacceptable damage and casualties.[13] As defined by McNamara after 1964, MAD was not so much a policy, but was rather a state of reality. He

further reinforced the need for a viable second-strike force as a central condition for the deterrence of nuclear weapons use by the Soviets. McNamara additionally rationalized the need to quantify the destructive power of the second-strike that would be necessary to deter the Soviet Union from launching a preemptive attack against the United States.

Quantification required a level of strategic adequacy that was attained with the completion of the Polaris and Minuteman programs. Quantification further allowed for the determination that the procurement of new offensive armaments above a certain level of sufficiency was not necessary. MAD, for McNamara, stabilized the strategic relationship with the Soviet Union and provided a means of rationally controlling the arms procurement process.[14]

An important benefit of the MAD doctrine was that, by permitting a rational definition of a sufficient level of force, it furnished the philosophical basis that would make arms control negotiations with the Soviet Union a serious possibility. With MAD, it was shown that interrupting the action-reaction cycle of offensive arms proliferation was in the interest of both superpowers. Technological progress, however, demonstrated that the action-reaction cycle was not limited to offensive weapons, but could result as well from the buildup of defensive systems. This potential buildup of ballistic missile defenses (BMDs) resulted in the initiation of the debate over ABMs.[15]

THE DEBATE ON ABM SYSTEMS AND THE ABM TREATY

The debate within the United States over anti-ballistic missile defense occurred in two phases. During the first phase, 1967-68, supporters of anti-missile defense opposed attempts by McNamara to suppress research in this area. These supporters were mainly from the military and Congress. McNamara, compelled by congressional pressure, did accept the funding for an anti-missile network known as the Sentinel system.

The second phase of the debate over ABM systems more or less began with the Nixon Administration in 1969. The Sentinel project was modified somewhat and redesignated Safeguard. The Nixon Administration had essentially one use for Safeguard, and that was as a bargaining chip in the forthcoming strategic arms limitation talks. Two sets of arguments emerged during the course of the resultant debate, during which Congress opposed the Administration's pro-ABM policies. The first concerned itself with the presumed technical limitations of ABM systems. Sentinel and Safeguard were partial defense systems designed to protect the American homeland against limited attacks. It was initially conceded that total protection then was inconceivable. McNamara clearly stated:

> ...none of the systems at the present or foreseeable state of the art would provide an impenetrable shield over the United States. Were such a shield possible, we would certainly want it and we would certainly build it.[16]

Opponents of Sentinel and Safeguard doubted the degree of success that could be expected of future systems having the same limited goals.

The second set of arguments centered on the destabilizing nature of ABMs and the subsequent risk of accelerating the arms race. If one accepted McNamara's thesis on the arms race, then the introduction of ABMs would lengthen the action-reaction cycle. Essentially, it was believed that any gesture made to save civilian populations from the threat of nuclear destruction might provoke the Soviets to increase their offensive forces.[17]

The first successfully deployed Soviet anti-ballistic missile was the Galosh, first publicly displayed in 1964. This was a nuclear armed missile designed to intercept incoming missiles outside the atmosphere.[18] The Soviets had no interest in the no-cities doctrine or graduated response. Their interest in MAD was equally ambivalent. Furthermore, the concept of mutual vulnerability to nuclear war was absurd in Soviet doctrinal terms. This line of thinking molded the Soviet's response to the ABM debate. Their perception was that defensive arms did not result in strategic instability. This perception was reinforced by Kosygin to Johnson during

the Glassboro meetings in 1967, when he said, "that giving up defensive weapons was the most absurd proposition he had ever heard."[19]

The Soviet rejection of MAD did not preclude a limitation of ABM systems at SALT I. For the Soviets, an ABM Treaty was a method of limiting supposed American technological advantage, whereas for the United States, there was pressure to use these systems as a bargaining chip in exchange for a limitation on Soviet launchers. Quoting Henry Kissinger:

> ...the trade-off of Soviet willingness to reduce offensive forces in exchange for our commitment to reduce ABMs was the essential set of incentives that produced the first SALT agreements.[20]

In 1972, the Soviet Union and United States signed the Anti-Ballistic Missile Treaty which limited the development, testing, and deployment of certain Ballistic Missile Defense (BMD) systems. This action did not represent a total abolishment of ballistic missile defense in practice. Unlike the U.S., which dismantled its single permissible ABM system at Grand Forks, North Dakota, the Soviet Union maintained its ABM system encircling Moscow per Treaty stipulation.

It is not correct to assume that the Soviet Union agreed to the ABM Treaty because it accepted Western concepts of stability and deterrence. The Soviets more than likely agreed to the ABM Treaty for three reasons:

1) At the time the ABM Treaty was signed, the U.S. was about to fully deploy the Safeguard ABM system which was more

capable than the relatively primitive Galosh system of the Soviets. Although limited, Safeguard had at least twelve launch sites, nineteen radars and several hundred interceptor missiles. It was likely the Soviets believed that a U.S. BMD system would reduce the effectiveness of the emerging Soviet counterforce strategy that required the capability to threaten a preemptive strike against U.S. strategic and military forces.[21]

2) The Soviets were aware that the U.S. could easily beat them in a race in BMD technologies. Thus, they likely agreed to the ABM Treaty to diminish U.S. BMD research and development while they caught up in areas of technology applicable to an advanced strategic defense system.

3) In the late 1960s, the U.S. was about to deploy multi-warhead missiles, known as MIRVs (multiple independently targeted reentry vehicles). Soviet plans to develop a counterforce strategy against U.S. military forces would have been complicated by the presence of a U.S. MIRVed missile force protected by a vast ballistic missile defense system.

The differences between Soviet and U.S. motivations in all three cases are distinct. Unlike the United States, which signed the ABM Treaty for fear that defensive forces would undermine strategic stability, the Soviets entered into the treaty to gain strategic leverage over the United States. This was evidenced by the Soviet position negotiated in SALT I. They negotiated with great care the Interim Agreement, so

as not to prevent the deployment of a new generation of ICBMs in the mid-1970s. Competition in offensive strategic missiles has continued since 1972, despite negotiations to conclude a second SALT Treaty.[22]

With the signing of the ABM Treaty, the two superpowers in reality acknowledged the continuation of the MAD relationship. The ABM Treaty thus became the first and only strategic accord between the U.S. and Soviet Union that expressed an agreement on the actual nature of the strategic relationship between them as opposed to only on the number and nature of weapons held by each. The ABM Treaty essentially codified the common desire by both nations to avoid a nuclear conflict. Notwithstanding, there were ambiguities and noncongruent interpretations of the Treaty. The most significant miscalculation by the United States was the assumption that foregoing the development of a credible ABM system would result in the reduction of Soviet offensive weapons. The continuing development and deployment of strategic missiles, as well as the stress laid in military writings on preparing to wage and win a nuclear war, have been taken as evidence of the Soviet determination to move beyond parity.[23]

POST-ABM TREATY DEVELOPMENTS

In the ten years following the signing of the ABM Treaty, the Soviet Union has substantially improved both its offensive and defensive strategic forces. Two factors resulted in a gradual deterioration of the Western strategic consensus based on MAD, the arms control process and the ABM Treaty. These two factors, technological change in both offensive and defensive weapons and the eroding of the détente process, resulted in the United States reexamining its strategic doctrine. It became apparent during the 1970s that there were serious political and ideological barriers to the establishment of an enduring consensus on the nature of superpower strategic relations. Additionally, there was a strain between the attainment of strategic stability and the need to honor American commitments to Europe. This strain prompted a seemingly permanent debate within the Western Alliance on deterrence and the American nuclear commitment.[24]

TECHNOLOGICAL TRANSITION

The doctrine of mutual assured destruction was framed around the technology base of the early 1960s. Two elements contributed to the perception of a stable strategic environment which enhanced the development of workable arms control policies. These elements were: (1) The relative inaccuracy of ballistic missiles and (2) The invulnerability

of newly developed offensive weapons. In the late 1960s, technological advancements altered the strategic environment. The prime development by the United States was the multiple independently targetable reentry vehicle (MIRV). Increasing the number of warheads available shifted the advantage to the offense and subsequently reduced the survivability of land-based second-strike forces. It was recognized that MIRVed missiles threatened strategic stability by providing an incentive for nuclear first use. Congress was critical of MIRVs because of the first use possibility and warned against the development of instigating policies.[25]

The SALT I treaty had been negotiated when the United States maintained a monopoly in MIRVs. This monopoly was short-lived as the Soviets developed their own MIRVs. As further multiplication of warheads per missile increased, it became evident that parity in launchers alone was no longer a norm of strategic stability. The development of MIRVs combined with advances in missile accuracy, system reliability and warhead miniaturization created a seemingly insurmountable barrier to any potential agreement designed to limit the proliferation of nuclear warheads.[26]

Technology itself did not alter the basis for the MAD relationship. It did, however, encourage the development of selective strike scenarios and subjected the concept of deterrence to much more intensive examination. New technology, due to its flexibility, encouraged in the United States a debate centered more on nuclear operational options

as opposed to the deterrence value only. The possibility of selective strikes has resulted in the strategic planners thinking in terms of war fighting options. Due to the quantitative and qualitative improvements in missile technology in the last fifteen years, it has become apparent that the strategic relationship between the United States and the Soviet Union has become far more complex, and in all likelihood, more unstable.[27]

POLITICAL TRANSITION

The years 1970-72 can be characterized as the best of détente and were distinguished by several major accomplishments that include the Quadripartite Agreement on Berlin and the Treaties of Willy Brandt's Ostpolitik. As détente deteriorated during the latter 70s, the United States once again began to reexamine its relations with the Soviet Union and the consequences of arms control. A general conclusion from the reexamination is that the United States willingly contained its military posture (some would argue ignored), particularly in the arena of strategic nuclear weapons, whereas the Soviets significantly modernized their conventional and nuclear forces. Gains in Soviet nuclear proficiency, in particular, brought into serious question the underlying assumptions of U.S. arms control policy. As former Secretary of Defense Brown put it:

> As our defense budgets have risen, the Soviets have increased their defense budget. As our defense budgets have gone down, their defense budgets have increased again.[28]

This new political dimension dampened the American enthusiasm for arms control. Even though the arms control process continued, expectations were lessened in reference to strategic benefits. It became obvious that the quantity and characteristics of nuclear weapons far exceeded what was required to support the doctrine of MAD. Counterforce and selective strike scenarios were developed by strategic planners to support the additional nuclear capacity. For the Americans, the end of détente and the restrictions of the arms control process resulted in a significant change in the balance of forces that favored the Soviets. This dilemma created special concerns for the Europeans.

EUROPEAN SECURITY CONCERNS

The problem of European security became more complicated when the United States homeland became vulnerable to Soviet nuclear attack. An Alliance concern is how Europe can best defend itself in a situation that matches serious American strategic vulnerability with Alliance conventional inferiority. In the past, extended deterrence covered the strategic gap resulting from European conventional weaknesses. Many Americans still think that U.S. nuclear

forces are maintained solely to deter nuclear strikes against the American homeland. In 1980, Secretary of Defense Harold Brown clarified the U.S. position.

> ...deterrence must restrain a far wider range of threats than just massive attacks on U.S. cities. We seek to deter any adversary from any course of action that could lead to general nuclear war. Our strategic forces also must deter nuclear attacks on smaller sets of targets in the U.S. military forces, and be a wall against nuclear coercion of, or an attack on, our friends and allies. And strategic forces, in conjunction with theater nuclear forces, must contribute to deterrence of conventional aggression as well.[29]

Perhaps more than anywhere else, Western nuclear strategy in Europe is plagued by the problem of credibility. The European continent, being so densely populated, lends itself less to being defended by nuclear weapons than any place else on earth. There is an element of truth to the observation that villages in Germany are about a kiloton apart.[30]

The reality of an increased Soviet strategic capability has resulted in a perceived difference in the definition of deterrence between the Americans and Europeans. For the Americans, deterrence implies reinforcement of European defense capability and an incremental and flexible response to nuclear weapons. To the Alliance, the best of the deterrents was that provided by the strategy of flexible response adopted by NATO in 1967. Flexible response emphasized that the forces of each side countered those of the other: strategic weapons deterred strategic weapons,

tactical weapons deterred tactical weapons, and conventional weapons deterred conventional weapons.[31] The argument for flexible response use went as follows: if an American strategic response to a Soviet invasion of Europe is no longer credible because the U.S. homeland is at risk to Soviet retaliation, perhaps the use of tactical nuclear weapons, in Europe itself, would be.[32]

Not all European leaders were content with the flexible response strategy. There has long been a concern that the U.S. seeks to decouple its security from that of Europe. Decoupling could mean either that the U.S. would not defend Europe against a Soviet attack, or that the Americans and Soviets would fight a limited nuclear war on European soil only. In the first situation, Western Europe might be susceptible to Warsaw Pact invasion from the East, or to political intimidation. In the latter situation, the U.S. and Soviet Union might fight each other to the last European, a not so pleasing prospect to the Europeans themselves. The argument for coupling the U.S. and Western Europe is that once it became clear that U.S. strategic forces would be utilized against the Soviets in Europe, both the superpowers would exercise restraint and the nations of Western Europe could also be free of Soviet intimidation. Conversely, if the fate of the American homeland was decoupled from the defense of Europe, the superpowers might behave less responsibly if their respective territories were not threatened.[33] Anything that weakens the coupling link elicits

the probability of a conventional or nuclear confrontation limited to Europe, which in turn, makes that conflict more likely. The perceived danger of decoupling is that it might tempt an aggressor. Precisely to prevent the perception of decoupling, U.S. military forces totaling over 240,000 have been stationed in West Germany. Since the early 1950s, these forces have been there not so much as an occupying force or even for their superior fighting ability, but as a trip wire. This Officer can attest to the trip wire rationale having served with the U.S. Army Berlin Brigade, a unit of four reinforced combat battalions surrounded in East Germany by over twenty Warsaw Pact divisions. It is reasoned that the U.S. would honor any additional military commitment to protect European allies if U.S. forces were under attack.

For the Alliance, there is a strain between the strategic and political requirements for security. From a strategic viewpoint, any American policy that reduces or eliminates the threat of utilizing nuclear weapons, diminishes European security. At the same time, an arms control process is perceived as a necessary action to reduce the potential of superpower conflict. From this perspective, the Europeans accepted the SALT I and ABM agreements.

The U.S. commitment strategy to Europe has been modified over the years in response to the superpower balance of nuclear forces. The first major change came with the replacement of massive retaliation doctrine with that of flexible response. Next came the Schlesinger doctrine in

1974 which was reworked in 1979 and issued as Jimmy Carter's Presidential Directive 59. These doctrinal developments evolved in response to the new strategic situation resulting from U.S. vulnerability and nuclear parity with the Soviets. PD 59 formalized two elements of U.S. strategic nuclear strategy: (1) It expanded strategic nuclear options so that an American decision to resort to strategic nuclear forces did not necessarily expand to an all-out nuclear conflict and (2) It was an attempt to ensure that the United States possessed the necessary assortment of first-use options to deter a large range of other Soviet actions.[34]

The Schlesinger doctrine was, in fact, the application of flexible response to the strategic nuclear level. It recognized the importance of intermediate options with the escalation of military forces. The Schlesinger doctrine did not, however, ease the central concern of the Europeans of how to balance the risks and vulnerabilities of both the United States and Europe in order to guarantee a U.S. commitment in the event of conflict. The Schlesinger doctrine essentially enhanced U.S. credibility, but reduced the level of nuclear intensity.[35]

As time passed through five U.S. Administrations, the increase of strategic options following the advances in missile technology and the cancellation of political insurance offered by détente forced the Europeans to face the

reality of the Soviet threat. This reality of the strategic environment evidenced that Europe's situation differed considerably from that of the United States.

In recent years, debates about enhanced radiation weapons and theater nuclear force modernization have resulted in continued European tension between deterrence and defense. In all these debates, the Americans strived to maintain the credibility of the nuclear guarantee to Europe through the use of specific operational options to enhance deterrence. The Europeans, however, continued to perceive deterrence as an undefined threat and were dominated by the concern of using nuclear weapons on their homelands.

The Strategic Defense Initiative has resulted in a continuation of the deterrence/defense relationship that has readily moved towards selective use options. Most Europeans clearly prefer the pure deterrence and arms control days of the past, but the current debate on the SDI is of greater importance than those bygone. This debate is being conducted within a new set of strategic, political, and technological parameters, which makes it difficult for Europeans to maintain their strategic preferences. These parameters will be reviewed and examined in the next section.

SECTION II EURO-AMERICAN ISSUES, CONCERNS AND IMPLICATIONS OF THE SDI

This section will focus on the particulars of the current Euro-American debate on the SDI. The transatlantic exchanges of the past four years will be reviewed along with a discussion of the American responses to European concerns.

THE MANNER OF DISCUSSION

President Reagan's speech of March 23,1983, and the subsequent announcements that followed, clearly communicated that the United States condemned atomic weapons and nuclear deterrence as a general doctrine. The following passage from the President's statement best captures the program's strategic defense goals.

> What if free people could live secure in the knowledge that their security did not rest upon the threat of instant U.S. retaliation to deter a Soviet attack, that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies?[36]

The President's question highlighted the fact that, although U.S. nuclear deterrence has maintained the peace for 38+ years, in the final analysis, U.S. national survival has depended on the restraint and patience of the Soviets in a crisis. In other words, the United States does not fully

control its own destiny: U.S. survival ultimately depends on the restraints of Soviet leaders and their perception of risks and gains.[37]

To expand further, President Reagan is condemning nuclear weapons from a moral point of view. Since these are weapons of indiscriminate destruction, their existence takes the security of the United States and its allies out of their hands and exposes them to an unacceptable kind of war which results in the mass killings of civilians. This moral condemnation resulted in President Reagan's endorsement of a strategic relationship based on mutual assured survivability (MAS) rather than mutual assured destruction (MAD). The President committed himself to the attainment of MAS and called upon the scientific community, such as those who gave us nuclear weapons, to now give us the means to render nuclear weapons impotent and obsolete.[38] Soon afterwards the United States allocated twenty-six billion dollars to intensify SDI research in fiscal years 1985 to 1990.

President Reagan's vision of a perfect defense, although a reasonable objective, is at best a long way off. Strategic planners and Administration officials were compelled to elaborate interim objectives because of a range of doctrinal, arms control, and technological factors. In reference to doctrine, the questions were whether the protection of critical strategic assets should take priority over the protection of populations, and whether the transition from MAD to MAS should take place as a negotiated process with the

Soviets. Arms control concerns focused on whether the SDI should remain within the parameters of the ABM Treaty, and to what extent the program could be used as a bargaining chip at Geneva. The main technological concerns were whether boost phase interceptions should be developed rather than terminal defense systems, and whether the research effort should expand upon current ABM technology or the more advanced directed energy technologies.[39]

Besides President Reagan's desire, there were other reasons for reviewing strategic defense. Most notably the existence of a Soviet program, new technology developments, and the need, perceived or real, to gain negotiating leverage at Geneva. The eventual SDI program had itself to be justified concurrently with the United State's goal of and commitment to deterrence. It became necessary for the Administration to link the requirements of deterrence and arms control policy with President Reagan's final objective.

This new strategic concept was summarized by Paul Nitze in his speech to the Philadelphia World Affairs Council in February 1985.

> During the next ten years, the U.S. objective is a radical reduction in the power of existing and planned offensive nuclear arms, as well as the stabilization of the relationship between offensive and defensive nuclear arms, whether on earth or in space. We are even now looking forward to a period of transition to a more stable world, with greatly reduced levels of nuclear arms and an enhanced ability to deter war based upon an increasing contribution of non-nuclear defenses against

> offensive nuclear arms. This period of transition could lead to the eventual elimination of all nuclear arms, both offensive and defensive. A world free of nuclear arms is an ultimate objective to which we, the Soviet Union, and all other nations can agree.[40]

Despite these objectives, the debate between the United States and Europe suffered from the gap between the reality and the rhetoric behind the SDI. The nature of the SDI helped to keep the debate within limits compatible with transatlantic harmony. Although it was difficult to agree on the basic strategic concept, it was easier to acknowledge that there might be economic benefits from the research program.

European skepticism about strategic defense is not new. Alliance reaction to the U.S. anti-ballistic missile effort of the late 1960s and early 1970s was less than enthusiastic. Europeans uniformly expressed concerns that ABM system deployment would destabilize the East-West strategic environment. They feared that a Soviet ABM system would neutralize the independent British and French nuclear forces, and that a U.S. ABM deployment would lead to a return to American isolationism. Many Europeans then and now embrace the doctrine of MAD because it ensures the principle of shared risk, underscores allied solidarity, and conforms with their desire to let security abide in maximum deterrence and minimal defense.[41]

The initial Euro-American debate on the SDI took place in a transatlantic environment already tense from previous

crises such as the debate over enhanced radiation weapons (neutron bomb). A pattern of transatlantic political discourse had developed. That is, the Americans develop a project and present it to the public. Next, they send an envoy on a whirlwind tour of Europe to brief each country on the importance of the American initiative. The Europeans will in turn either support the project or criticize it and perhaps develop their own. Finally, the Americans will accuse the allies of nonsupport and not understanding the project.

The circumstances surrounding the announcement of the SDI certainly followed this pattern. European bureaucracies were as surprised as many entities within the U.S. Administration. Europeans once again found themselves confronted by a unilateral initiative with profound implications for their security. European leaders were less than pleased that the U.S. Administration chose not to consult with the allies in advance of a major change in U.S. policy. The unexpected method utilized to announce the SDI negatively biased the way it was received in Europe.

Equally damaging as the absence of political consultation were the subsequent inter-allied discussions. The U.S. Administration essentially opted to educate the Europeans with bilateral discussions whose goals were to convince them of the merits of the SDI. Offers to participate in the project were also bilateral. The first multinational initiatives were presented at the Nuclear

Planning Group meeting in March 1985 and at the summit meeting of the leaders of the industrialized nations in Bonn in May 1985. Previous to these meetings, the United States had avoided debate on the SDI within NATO committees. One might conclude here that a unified response was not desired from the European allies on the U.S. proposals. Consequently, there was no true Euro-American debate, but rather several bilateral debates between separate nations and the United States.

GENERAL EUROPEAN CONCERNS

After President Reagan's speech of March 23, 1983, the Europeans were silent for several months. This was partially due to the intermediate-range nuclear force (INF) debate dominating the political agenda in Europe and occupying the attention of both governments and the public. The SDI announcement was buried in a speech on U.S. defense policy meant to rally support for the President's military buildup whose merits were being challenged by Congress. Many Europeans did not take the SDI seriously preferring to think of it as an extemporaneous remark that had slipped through the political process.

Only after Secretary of Defense, Caspar Weinberger, affirmed a few days later that President Reagan had indeed been serious and intended to seek a defense that is thoroughly reliable and complete did the SDI capture media

attention in Europe. Consequently, it was not until early 1984 that the European's began to clearly express their concerns and reservations.

As aforementioned, the timing of the SDI proclamation was unfortunate from a European viewpoint. It placed the Alliance Governments in the difficult position of having to convince their domestic publics that their security required the new INF weapons on their soil, while the U.S. President was advocating a new concept to render those very arms impotent and obsolete.

To compound matters from the European perspective, the President had justified the SDI not only on strategic, but on moral grounds. He had advocated that deterrence by denial based on missile defenses was morally superior to deterrence based on the threat of nuclear retaliation. This new moral concept was not well received by the Europeans. To them, questioning the morality of nuclear deterrence, was equivalent to calling into question the validity of the very foundation upon which European security had rested since World War II.

The first major concern of European leaders was that they doubted the technological feasibility of building defenses against ballistic missiles. The President's strategic vision was based on unproven technologies which would take years to develop and prove valid. Allied politicians thus challenged the wisdom of a new strategic concept that was decades away at best and may indeed turn out

to be unrealizable. Much technological progress had been achieved since the allies had rejected missile defense on technical and financial grounds during the BMD debate of the late 1960s.[42] Given minimal evidence of realistic concepts for the short-term, European leaders found it difficult to understand why the President had thrust the debate over missile defense so prominently into the already heated controversy over NATO security policy towards the Soviet Union.

The second concern of European leaders was the cost of research and eventual deployment of strategic defenses. Although they are as accustomed to cost overruns in defense projects as are American defense planners, the enormous magnitude of the technological tasks defied even tentative cost estimates of the SDI. Estimates of one trillion dollars, widely quoted by U.S. critics, raised serious questions whether missile defenses were affordable and reinforced other reservations about the SDI.

Europeans were particularly concerned about the impact of the SDI on the U.S. contribution to NATO. By 1983, it had become apparent that congressional support for U.S. defense budget increases was dwindling in the face of mounting budget deficits. It was anticipated that fiscal constraints would force the Pentagon to reorder military spending priorities and that funding of SDI programs might require cuts in conventional force programs of direct concern to NATO. Reductions in the U.S. defense budget to support the SDI were

bound to slow NATO conventional force improvement programs and impede progress on lessening reliance on nuclear weapons.

In view of the ongoing debate over burden-sharing in NATO and U.S. pressures that the allies assume greater responsibility for the mutual defense in the conventional field, Europeans were concerned that the United States would try to compensate for the funding shortfalls in U.S. programs caused by the SDI. Some even feared the United States might demand financial contributions to SDI programs from the European allies, and that any reluctance might prompt a political backlash which would weaken political support for NATO in the United States.

Thirdly, there was confusion concerning the scope of the missile defenses the President had proposed. He had spoken only in general terms and avoided addressing specific technologies and basing modes of missile defenses. But once the term, "Star Wars" was widely employed by the press, the SDI was equated with space-based defenses. Since such defenses, if at all feasible, might not be responsive to some nuclear threats to Europe, allied leaders were uncertain about their benefits to European security.[43]

The President had expressly declared the goal of finding ways to intercept and destroy strategic ballistic missiles before they reached our soil or that of our allies.[44] His emphasis on the threat of ballistic missiles evoked fears that an impenetrable shield over the United States would leave Europe vulnerable to Soviet aggression. Furthermore,

by creating different zones of security in NATO, it was feared that the strategic unity of NATO would be severed, decoupling Europe from the U.S. nuclear deterrent. Critics further argued that such a situation would undercut the political foundations of coalition defense based on the concept of shared risk of the allies. This would weaken allied solidarity and deal a serious blow to the quality of NATO's deterrence strategy.

Since Europeans had come to view arms control as a vehicle for improving relations with Moscow, they were naturally dismayed by the gradual disintegration of the arms control process in the early 1980s. The SALT II agreement was nearly extinct and other negotiations were either deadlocked or showed little prospect for success. Additionally, the SDI threatened the only strategic arms treaty still in effect. The ABM Treaty had become the last symbol of détente, an era long since past. Allied commitment to uphold the ABM Treaty thus became the acid test of genuine interest in arms control.

The fourth concern of Europeans over the SDI focused on President Reagan's commitment to the ABM Treaty. Although the President had pledged to conduct SDI research within the framework of the ABM Treaty, the philosophy of the SDI clearly runs counter to its spirit and underlying strategic philosophy. The Europeans consider the ABM Treaty as the foundation of détente and arms control, therefore, any attempt to alter it encounters stiff resistance. The allies

hold a view of security that accords military preparedness in arms control with equal priority in their overall security strategy.

Europeans tend to view major technological breakthroughs more readily in political rather than in military terms. They are less inclined to regard them as a panacea for political problems and are sensitive to their political ramifications. Technology can only displace, but not resolve political differences that are at the heart of a threat to national security. By contrast, Americans are more prone to look for technological fixes, though they may be only temporary hardware answers to political questions.[45] Given this general disposition, Europeans, thus, are reluctant to share the President's vision of rendering nuclear weapons impotent and obsolete through development of missile defenses. The Europeans natural rejection of technical measures against nuclear weapons leads them to emphasize the risk that the SDI may fuel the arms race as both sides try to develop countermeasures to preserve their nuclear deterrents. The Europeans further believe the ABM Treaty prevents at least a defensive arms race and serves also as a brake on the offensive arms race by relieving fears of sudden changes in the strategic environment. They are, therefore, less alarmed by Soviet violations of arms control treaties than the U.S.

Europeans also honor the ABM Treaty because it remains a symbol of the U.S. nuclear guarantee of their security. MAD is neither a strategy nor an immutable fact of life in the

nuclear age. It rests on a central balance of terror with the ABM Treaty as its center and arms talks are the tools with which to maintain and adapt that precarious balance to the destabilizing effects of technological progress. Europeans tend to believe their security depends on the continued credibility of MAD, although they would like to see nuclear arsenals reduced to the lowest possible levels consistent with MAD requirements. The extent of their commitment to MAD became clear when ardent opponents of INF deployment, like the West German Social Democrats, attacked the SDI on grounds of eroding nuclear deterrence.[46]

The ABM Treaty further guarantees the viability of the British and French nuclear forces. Both nuclear forces assure Europeans of their ability to trigger nuclear war and hedge any lingering doubts about U.S. willingness to employ nuclear weapons in the defense of Europe. Concern about U.S. reliability in the face of her growing vulnerability to Soviet retaliation was France's main rationale for developing a nuclear deterrent and explains why she cherishes her nuclear autonomy in the face of overwhelming inferiority relative to the superpowers.[47]

Concerns about the implications of the SDI for the future of the small European nuclear forces are thus shared by most European countries for reasons of security and more importantly, status. Without a role in nuclear deterrence, Europe surely would be relegated to a second rank status in world affairs. Further, those who advocate a greater

European independence from the United States see in the small independent nuclear forces, the nucleus for a European nuclear deterrent. However, even a fully integrated European nuclear force can strengthen Europe's greater political autonomy and security only if the ABM Treaty continues to ensure the vulnerability of the superpowers. Accordingly, the introduction of strategic defense would not only deal a severe setback to Europe's ability to trigger nuclear escalation of conventional conflicts, but would erect a perhaps insurmountable barrier to greater European autonomy in the context of a unified Western Europe.

Finally, regardless of the reservations about the SDI, Europeans have been reluctant to back it because they are uncertain of its future. Initially, they were concerned whether the President himself was firmly committed to the SDI or had advanced the idea only to gain leverage in future arms control negotiations with the Soviet Union. Furthermore, deployment decisions would be made by some future President whose attitudes towards the SDI were as uncertain as the programs technical feasibility, cost, and impact on arms control.

DEFENDING EUROPE

One of the fundamental issues raised by the SDI is whether it can defend Western Europe. From a European perspective, the principal value of SDI depends on whether it

can operate in the European context by providing: (1) Protection of relevant sites such as airfields, missile launchers, ports, and communications; and/or (2) Meaningful population defenses.

Military site protection and meaningful population defense are already feasible using current SDI technology. Advances in data processing, miniaturization, and precision guidance systems make a European strategic defense more feasible. In many respects, defending Europe is easier than defending the Continental United States and even a modest point defense could provide a considerable degree of protection to the European civilian population, given the small area to be defended and density of the population. Strategic defense potentially can be effective against a variety of Soviet ballistic missile threats to Europe.

Long-range missiles. Soviet intercontinental ballistic missiles (ICBMs) and sea-launched ballistic missiles (SLBMs) are generally trained on the United States, but some of them probably have been designated as strategic reserve for an attack on Western Europe.[48] ICBM trajectories and longer ranges renders them vulnerable to existing ground-based, non-nuclear ballistic missile defenses. Some space-based weapons would be effective as well, which means that strategic defense protecting the continental United States could cover Europe against long-range Soviet missiles. Sea-

launched ballistic missiles flying on a suppressed trajectory could be intercepted in a like manner by ground-based defenses in Europe.

The Soviet MIRVed SS-20 travels on a lofted trajectory carrying it high into space before its three warheads reenter the earth's atmosphere at a much slower speed than ICBM warheads. Despite its short flight time, the combination of lesser speed and flight path through space may render SS-20 warheads even more vulnerable than ICBM warheads to intercepts by a broad range of space-based systems. Given adequate reaction time, the surviving attacking warheads could be destroyed by ground-based point defenses.

Short-range missiles. (SS-21,22, and 23) are even more vulnerable to defenses, although quick reaction time is very important. Missiles fired at Western Europe are visible to fairly simple missile tracking radars throughout most of their flight because they travel much slower than ICBMs or MIRVed SS-20s and can be tracked and targeted more readily. Furthermore, without the benefits of flying through the weightlessness of space, it is much more difficult for the Soviets to add so-called penetration-aids to confuse NATO radars. Defense against these intermediate range nuclear missiles could rest on advanced terminal/site defenses consisting of modified surface-to-air (SAM) missiles such as an upgraded Patriot anti-tactical missile, improved Hawk, or new ground-based low-altitude defense systems (LOADs) currently in development.[49]

Defenses against Soviet cruise missiles could employ: (1) Air-to-air missiles launched from interceptor aircraft with look-down/shoot-down radar; (2) Surface-to-air missiles (SAMs) comparable to the Soviet SA-12; (3) Electronic countermeasures and other techniques to confuse cruise missile flight computers; (4) Laser weapons; (5) High velocity radar-controlled energy guns; and (6) Space-sensor directed defenses.

Strategic defense cannot protect against every means of nuclear delivery. Atomic Demolition Munitions (ADMs) utilized by the United States Army Corps of Engineers are an excellent example of a nuclear weapon that could be literally hand-carried. In sum, the SDI could deal with the most serious nuclear threats: (1) Bombers can be intercepted with anti-aircraft systems; (2) Multiple warheads (MIRV) can be destroyed by space-based systems during the boost phase before they disperse their warheads in mid-course, and during reentry into the atmosphere by advanced ground-based interceptors; (3) Submarine-launched ballistic missiles, which travel slower than land-based missiles, can be intercepted at various points on their flight path. Flying on a suppressed trajectory, SMLMs are more difficult to engage, but their slower speed during reentry can render them vulnerable to various localized defense systems; (4) Nuclear capable artillery are most vulnerable to enemy fire since

range limitations force their deployment at the forward edge of the battle area (FEBA); and, regardless, their range and damage capabilities are limited.[50]

ENHANCING STABILITY

Like many of their American counterparts, some Europeans contended that the deployment of the SDI would destabilize the strategic balance, and even worse might precipitate nuclear war because Moscow would probably not permit the U.S. to neutralize its strategic deterrent. According to this analysis, Moscow would take both offensive and defensive measures to counter the effects of the SDI. It was argued that an unconstrained arms race would spell the death of arms control and détente, destabilize the strategic relationship with the superpowers, and heighten the risk of war.

Although these fears were expressed in terms of the strategic impact of the SDI, they were in fact expressions of general European disenchantment over the deterioration of U.S.-Soviet relations in the wake of the Soviet invasion of Afghanistan. The European allies had pursued, during the era of détente, a deliberate policy of accommodation towards Moscow and had forged closer economic ties with the Soviet block. They were keenly aware that their ability to amend the division of Europe depended heavily on the overall climate of superpower relations. The downward trend in relations since the late 1970s had confined European freedom

of action and had pitted allied political and economic interest against broader U.S. foreign policy objectives.[51]

The full implications of strategic defense for strategic stability will depend to a large extent upon the type of systems deployed, their lethality, the scope of Soviet defenses, and the overall strategic environment and conventional force balance existing at the time NATO's strategic defenses become operational.

Strategic defense of the United States could enhance the stability of NATO's nuclear deterrent in a number of ways: (1) A limited point defense of hardened missile silos and command, control, communications, and intelligence installations increases their chances of surviving a Soviet attack and thus strengthens the credibility of extended deterrence.

(2) Defenses will multiply the uncertainties Moscow would face in planning and executing a disarming first-strike against the United States. This will deter Moscow from launching a preemptive first-strike against the U.S. land-based deterrent, enhance crisis stability, and instill confidence in the availability of the U.S. nuclear deterrent.

(3) An area defense protecting the U.S. civilian population not only would increase the likelihood that the U.S. would risk a retaliatory strike, but also would allay doubts about the American nuclear commitment to West European security. Quoting one NATO defense minister to his colleagues in 1983.

> For years, I have been listening to you fellows raise questions about the credibility of the American commitment. Now obviously, if the Americans had a strategic defense, that would greatly increase a likelihood that they would be prepared to use nuclear weapons to defend us, because they would not be putting themselves at risk. I would like to see the United States with a strategic defense even if it could not protect Europe, because in the fundamental sense it would assure the credibility of the American strategic deterrent.[52]

If European reluctance to align with the U.S. in confronting Moscow can be attributed at least in part to misgivings about U.S. politico-military reliability, then strategic defense should give the allies renewed faith in U.S. readiness to come to their defense. This should enhance both political cohesion and the motion of a common purpose within the Alliance. As Norwegian defense analyst Johan J. Holst Observed:

> A U.S. population defense may make it less likely that the U.S. would be black-mailed by the threats or execution of exemplary attacks into backing down in a crisis over Europe.[53]

(4) A European strategic defense system, perhaps combined with such passive defenses as hardening of key military installations and civil defense, would increase the credibility of the West's deterrent forces. The Soviets would be less tempted to launch a nuclear or conventional attack on Western Europe if crucial NATO military sites, such as airfields, supply points, nuclear weapons storage depots, or facilities for U.S. and British reinforcements and command

facilities were shielded against a Soviet preemptive attack. Strategic defense thus could make NATO's flexible response more likely and more feasible.

(5) The extended area coverage of limited point defenses could protect civilian populations considerably.

(6) Strategic defense could raise the nuclear threshold. A European-based strategic defense that protected NATO nuclear and conventional military facilities, particularly those central to NATO reinforcement from the U.S., would actually strengthen NATO's conventional staying power and thus delay and perhaps avoid the necessity for nuclear response.

(7) If both the Soviets and the West were to deploy strategic defense systems, strategic stability would be increased. Both superpowers would have their retaliatory forces protected as well as their command, control, communication and intelligence centers, and perhaps much of their civilian populations as well. Strategic defense of Europe would reinforce this stability, by lessening the vulnerability of NATO's nuclear systems, and diminishing their role in NATO deterrence strategy.

EXTENDED DETERRENCE

One concern, among the Europeans, that arose out of President Reagan's announcement of the SDI, is their traditional fear of decoupling, evidence of which would be a

weakening of extended American deterrence. Consequently, the Europeans perceived the SDI as the latest of a long list of American proposals which dilute deterrence by emphasizing defense. Lawrence Martin's analysis of this phenomenon on the subject of the Sentinel Project applies equally to the SDI.

> At least at first sight, BMD seems to be entirely concerned with fighting wars rather than with deterrence. This has assured it a chilly reception in Europe, similar to that accorded Mr. McNamara's advocacy of flexible responses involving provision of capacity to sustain a prolonged conventional engagement in Europe.[54]

Additionally, there was a more specific European concern that anti-missile defenses of the United States and the Soviet Union would shelter each of these countries from the consequences of either a conventional or nuclear war occurring in Europe, which, for the Europeans, made such a conflict more likely. Once again, the continuity of the European perspective over the SDI with the reactions to the Sentinel Project is similar.

> There is also the unpleasant suggestion that when both superpowers had acquired a high degree of defense, they would be tempted to place a higher hostage value on each other's half of Europe, and might conduct nuclear or conventional wars more freely on European territory, either for want of any other strategy or because their fear of the consequences would be reduced.[55]

The Americans responded to both of these concerns. First, by insisting that the SDI would also protect Western Europe; and, second, that American vulnerability, in fact,

weakens extended deterrence, which can only be reinforced by a process which increases American defense against possible Soviet nuclear attacks.[56]

The first American argument was hardly convincing to the Europeans. The speech of March 23, 1983 referred only to defense against ballistic missiles which remained the priority and objective of SDI research. This limited objective would only partially counter the much more diversified range of nuclear threats faced by Western Europe, such as cruise missiles, bombers, and nuclear artillery. It quickly became clear that while the SDI was concerned with ICBMs, it had little to say about intermediate-range nuclear missiles, such as the SS 21, 22, and 23. The Hoffman report had noted in 1983 that anti-tactical ballistic missiles (ATBMs) were beyond the scope of the ABM Treaty, and judged that their development would directly benefit our allies as well as ourselves.[57] Certainly, intermediate missiles threatening Europe could be the object of strategic defense, although their relatively shorter flight times would probably make interception even more difficult than for ICBMs. The SDI, by definition, could not deal with the full range of nuclear threats facing Europe.

The second American argument, however, that U.S. strategic vulnerability weakens deterrence, was more plausible. It was American vulnerability that had provoked, in the early 1960s, the first major crisis of European confidence in extended deterrence. The Americans argued

that, if extended deterrence is credible when they are vulnerable to a Soviet retaliation, it is no less credible once the United States is less vulnerable to, or even completely safe from, a nuclear threat. In fact, American officials emphasized that the SDI reinforced extended deterrence.

American academic analysts were to argue that the principal challenge to extended deterrence is the imbalance between Soviet and American counterforces (the window of vulnerability) that may make it difficult for the United States to implement the selective options necessary to give effect to the U.S. nuclear guarantee. The continued development of Soviet BMD options further eroded this American capacity.[58]

American supporters of the SDI used the above arguments in a manner that could not fail to cause serious doubts in Europe as to the actual validity of the American nuclear guarantee. Fred Iklé, U.S. Under Secretary of Defense, said in the Spring of 1985:

> ...in the long run the force of this guarantee depends on its support by the American people. Some European opponents of missile defenses for the United States appear to believe that to assure the vulnerability of the United States somehow preserves this guarantee. This logic makes no sense.[59]

By emphasizing the argument that American vulnerability undermined extended deterrence, the United States risked weakening what was destined to remain the central element of Alliance strategy for decades to come.

Nevertheless, the argument that American vulnerability would weaken extended deterrence failed to take into account the fact that the SDI could not recreate the situation of the early 1960s when American strategic invulnerability was coupled with Soviet vulnerability. The SDI itself could not guarantee the validity of extended deterrence since all would still depend on the Soviet reaction to American improvements in BMD. A successful Soviet BMD program, or a dramatic improvement in Soviet offensive capabilities, could always render meaningless whatever deterrent advantages might be gained from a successful SDI program. Extended deterrence could only be unmistakably strengthened by the SDI if the United States were able to maintain a distinct superiority over the Soviet Union in BMD deployment, a goal which was never acknowledged by President Reagan, who, on the contrary, even stressed the importance of implementing the SDI through a cooperative Soviet-American process, going as far as offering to share American BMD technologies with the Soviet Union. Therefore, since the SDI was aimed at reducing the role of nuclear deterrence in Western security, it could only make the imbalances in conventional forces more critical for European security. This notion was acknowledged by Paul Nitze as a possible side effect of the SDI.

> For example, the deterrent effect of nuclear arms has helped prevent conventional conflict. Were we to eliminate such weapons, the need for a stable, conventional balance would become even more important. We would have to study how to diminish the threat posed by imbalances of conventional weapons.[60]

The SDI proceeds from the thesis that the West depends too much on nuclear weapons for its security and that the United States would also like the role of these weapons for the specific defense of Europe to be reduced. The SDI, would, however, impinge on a delicate balance between nuclear and conventional deterrence. Under an SDI umbrella, only dramatic improvements in European conventional forces would make nonnuclear deterrence at all possible. Any attempt to balance Warsaw Pact conventional forces would require huge economic efforts that the Europeans have been unwilling to undertake. Additionally, funds for conventional force improvement would simply not be available due to the high expenditures required to develop BMD technologies. Furthermore, if a perfect conventional balance were to be established, this would not provide the security that is currently provided by the nuclear balance of terror. This is mainly due to the fact that the SDI probably will not protect Europe from all forms of nuclear threats.

These general concerns and the aforementioned issues and implications have shaped Europe's response to the announcement of the SDI. Differing geostrategic interests of the United States and the allies constitute a fundamental and

recurring cause for debate within NATO, especially when Washington assumes its role as leader of the Alliance and attempts to formulate strategic or political responses to changes in the security environment of the allies. There is no doubt that a reopening of this debate on strategic defense had long been overdue. Even critics of SDI concede that much. The 1985 strategic survey of the International Institute for Strategic Studies stated:

> While the SDI raises a host of potential problems for the West, it can be argued that the President's call for a strategic reassessment was long overdue. No matter what eventually becomes of the SDI and its related issues, the time had come to review the basic strategic assumptions which have shaped the post-war world.[61]

Because the strategic problems that prompted the United States to initiate the SDI will not go away, NATO must adapt its strategic thinking and planning to the gradual introduction of ballistic missile defenses. Otherwise, its strategy and force posture may become irrelevant to the threat the alliance was founded in the first place to deter. Such adjustments will not be easy and require intense political skill on both sides of the Atlantic. Regretably, this was not adequately recognized when the SDI was launched in March of 1983.

SECTION III THE POLITICS OF SDI

In his March 1983 speech introducing SDI, President Reagan did not ignore Europe altogether as was initially charged by allied critics. Rather, he asked:

> ...what if free people could live under defensive protection, could move away from the threat of massive instant retaliation as deterrent to attack, and had the capability to destroy incoming strategic missiles before they reached U.S. soil or that of our allies?[62]

Reagan further reassured them by stating that their vital interests and ours are vitally linked and that we must and shall continue to honor our commitments.

The most immediate governmental reaction came from West Germany, where the Bonn government expressed cautious surprise. It sought to play down the significance of the announcement by stressing that the SDI was no more than a long term research program. Defense Minister, Manfred Woerner, reportedly welcomed the idea, but argued that it would have no imminent impact on NATO strategy and, therefore, would not render unnecessary the INF missile deployment. He further stated in April 1984, following a meeting of the Nuclear Planning Group:

> It would be intolerable for one of the two superpowers to gain a one-sided lead in setting up such a system. The superpower with the advantage would then have absolute superiority and the other power would have to submit.[63]

This negative position was also adopted by the German Foreign Minister, Hans-Dietrich Genscher, who called on the United States to negotiate with the Soviet Union.[64]

The French position, composed of three elements, was outlined at the Geneva Disarmament Conference on June 12, 1984. First, France reaffirmed its commitment to the concept of deterrence as well as the ABM Treaty of 1972. Secondly, it implicitly condemned the American initiative as a situation in which each of the principal powers sought to make their own territories entirely invulnerable to retaliation. Finally, the French were concerned that such systems once deployed would not be easily subject to political control. Their position further called for a ban on anti-satellite weapons and directed energy weapons capable of destroying ballistic missiles or satellites.[65]

By the end of 1984, French official attitudes to the SDI had become consistently critical. French Minister of Foreign Affairs, Claude Cheysson, asked how Europe could have confidence in the American guarantee if the United States were to shelter itself behind the new Maginot Line.[66] French President Mitterrand, himself, indicated in December 1984, that the SDI would lead to an excessive arms buildup.[67]

British concerns about the SDI came to light in May 1984, when Defense Minister, Michael Heseltine, judged that if the SDI were effective, it removed the rationale for planned British investments in a new generation of ballistic missiles. The House of Commons Defense Committee agreed that

it was in the best interest of the United Kingdom not to deploy defensive systems and reaffirmed Britain's support for the ABM Treaty.[68]

In November 1984, Prime Minister Margaret Thatcher, presented two important reservations to the SDI. The first was its high cost and the second was that it might renew the arms race. She argued that within a short time the military balance between the two superpowers would once again be equal, but at a higher level and a higher cost. A few days later at Camp David, the British Prime Minister was able to reach an agreement with President Reagan who answered British concerns about the SDI. The two agreed on four general principles which will be examined hereafter.

SELLING SDI

European anxiety about the SDI was actually intensified by U.S. officials in the course of explaining the program to the allies. The scope of the SDI, unclear from the outset, became hazy as time went on. The President had discussed only destroying ballistic missiles so as to transcend deterrence based on the threat of retaliation. Such a change in strategic policy implied that the SDI would not be responsive to most threats to European security. Furthermore, it embodied a profound change in the nature of deterrence with far-reaching security ramifications for Europe. A radical reduction of the role of nuclear weapons

in deterring Soviet aggression in Europe raised the undesirable risk of conventional warfare in Europe.[69]

In their attempts to reassure the allies, U.S. officials confused more than they clarified. This was partially due to the fact that the American bureaucracy was also taken by surprise and had not yet developed a coherent rationale for the SDI. Europeans were often subjected to contradictory explanations and justifications which did little to raise their confidence that their interests would be adequately considered. They also received conflicting feedback from the domestic debate in the United States, where the Administration spoke with many voices in order to rally support for the program and disarm its critics.

The President's strategic vision was replaced by a variety of more limited objectives, largely to counter charges that the ambitious goal of a leak-proof defense was unattainable even in the distant future. U.S. officials down played the goal of transcending deterrence and, instead, emphasized ways that missile defenses could strengthen deterrence by denying Moscow emerging war fighting options. It was argued that the SDI would close the window of vulnerability that the Administration had been unable to close through its offensive nuclear buildup.

Reinforcing deterrence through limited defenses was far more marketable in Europe than an entirely new strategic concept and helped to diminish allied concerns. Repeated U.S. pledges not to neglect defenses against threats to

allied security also had a calming effect. The most significant allied worry focused on tactical and short-range nuclear missiles that do not travel on a ballistic missile trajectory and can strike their targets within minutes after launch.

A few days after his speech, the President issued a National Security Directive (NSSD 85) establishing the long-term goal of eliminating the nuclear threat. A second Presidential directive called on the Department of Defense to report by October 1983 on the technical feasibility of strategic defenses and their strategic policy implications. Two DOD study groups were convened in June to examine these questions and draw up the requested reports.

The Fletcher Commission, named after its chairman, Dr. James Fletcher, concluded that emerging technologies are sufficiently promising to justify a major long-term development program and proposed a detailed research plan to establish options for a defensive strategy. The commission projected that a fully integrated, multi-layered defensive system might be deployable after the turn of the century.[70]

The Future Security Strategy Study (FSSS), chaired by Fred Hoffman, concluded that less than perfect defenses can reinforce or help maintain deterrence by denying the Soviet's confidence in their ability to achieve the strategic objectives of their contemplated attacks. Strategic defense would thus reduce incentives for a preemptive strike, diminish pressures to expand offensive nuclear arsenals, and

facilitate future arms control efforts. The FSSS advocated a flexible Research and Development Program designed to offer early options for the deployment of intermediate systems.

More importantly for the Europeans, the Hoffman report investigated the feasibility of defenses against non-ballistic missile threats and endorsed anti-tactical missile options particularly relevant to countering Soviet nuclear threats to Europe.

> Deployment of anti-tactical missile systems is an intermediate option that might be available relatively early. The system might combine some advanced midcourse and terminal components...with a terminal underlay. The advanced components, though developed initially in an ATM mode, might later play a role in continental United States defense. Such an option addresses the pressing military need to protect allied forces as well as our own invaders of operations, either nonnuclear or nuclear attack. It would directly benefit our allies as well as ourselves.[71]

The Hoffman report specifically addressed allied defense requirements in a future strategic environment dominated by defensive systems. It also expressed a detailed linkage between elements of the U.S. research program and Europe, integrating allied needs into a phased U.S. approach to strategic defense. Most importantly, the Hoffman report openly acknowledged the political desirability and technical feasibility of early defense deployment in Europe to reassure the allies that strategic defenses will not detract from their security.

Both the Fletcher and Hoffman reports resolved the apparent contradiction between the goals of reinforcing and

transcending nuclear deterrence. The Hoffman report became the blueprint for joint allied studies of missile defense options for Europe and helped alleviate some of the most divisive allied misconceptions about the SDI.

SEEKING ENDORSEMENT

Allied interest in the SDI intensified after the President issued a third directive (PD 119) in January 1984. This directive ordered the initiation of a focused program to demonstrate the technical feasibility of enhancing deterrence and thereby reducing the risk of nuclear war through greater reliance on a defensive strategic capability.[72] This shift in the public description of the purpose of the SDI research program attempted to clarify the intimate link between reinforcing and transcending strategic nuclear deterrence. It further demonstrated an active effort on the part of the United States to seek active political endorsement of the SDI by the European allies. Such endorsement was deemed critical for a number of interrelated reasons.

First, Washington was anxious to maintain, after the breakdown of the Geneva Arms Control talks in November of 1983, a unified Western front against the Soviet Union. Due to their walkout, Moscow had suffered a loss of prestige and tarnished its image in Western Europe. A public dispute

among the allies over the SDI might partially clear Moscow of responsibility for the collapse of the arms negotiations and rekindle the European peace movement.

Secondly, an extended dispute over the SDI risked allied cooperation on other common defense matters. NATO was in the process of examining ways to improve its conventional defenses in order to raise the nuclear threshold. Strengthening NATO's conventional capabilities has been a standing goal of successive U.S. administrations. The dispute over INF deployment had renewed European interest in lessening reliance on the early use of nuclear weapons. It was in the U.S. interest to maintain this minimal renewed interest, and being sensitive to European concerns about the SDI was considered instrumental to keep the SDI from interfering at the political level with NATO deliberations on conventional defense measures. Furthermore, actions to diminish the prominence of nuclear weapons in NATO doctrine would reinforce the strategic thrust of the SDI.

Thirdly, the White House realized that European endorsement would be useful in gaining congressional funding of the program. As long as the SDI was perceived as a divisive issue undermining alliance solidarity, SDI opponents in Congress would try to invoke allied reservations in order to defeat the program. Consequently, European consent was important for the political survival of the SDI, but open support of SDI research was clearly more desirable.

The United States initiated a campaign to consolidate allied endorsement of SDI research. First, it began broad and intensive consultations with the allies to exchange information on the SDI program. The United States further tried to bolster efforts by European governments to present the SDI as a response to Soviet BMD programs by making public several reports detailing the scope of Moscow's effort in that field. Discovery of the large phased array radar at Krasnoyarsk in Siberia in mid-1983 also furnished concrete and irrefutable evidence of Soviet violation of the ABM Treaty. This discovery reinforced the U.S. claim that it was mandatory to deny Moscow a unilateral advantage in strategic defense.

Secondly, the administration agreed with allied demands to explicitly define the parameters of the SDI program. An SDI-Charter was formulated at a meeting between President Reagan and British Prime Minister Margaret Thatcher at Camp David in December 1984. This Charter consists of four general principles.

> 1. The U.S. and Western aim is not to achieve superiority but to maintain balance, taking account of Soviet developments.
>
> 2. The U.S. will negotiate with Moscow prior to deploying SDI.
>
> 3. The overall aim is to enhance not to undermine deterrence.
>
> 4. East-West negotiations should aim to achieve security with reduced levels of offensive systems on both sides. This will be the purpose of resumed U.S.-Soviet negotiations on arms control.[73]

The four-point statement essentially codified in writing earlier allied agreement on the scope and purpose of the strategic defense program. Its importance was mainly symbolic from the American point of view. However, European allies have treated it as a yardstick by which to judge U.S. SDI policy and have used it to reassure the anti-SDI portion of their publics that the SDI would not automatically lead to deployment of ballistic missile defenses.

The SDI-Charter was put to its first test in October 1985 when Robert McFarlane suggested that testing and development of SDI technologies based on other physical principles were permitted under the terms of the ABM Treaty. McFarlane's broader interpretation of the treaty prompted allied protests. The allies accused Washington of abandoning the U.S. commitment to conduct SDI research consistent with the restrictions of the ABM Treaty. The White House was reminded that the President had reaffirmed the restrictive interpretation in the Camp David statement that constituted the basis of European support of SDI research.[74]

It is arguable that the Camp David SDI-Charter addressed only the deployment of strategic defenses, nevertheless, Europe's reaction emphasizes both its commitment to the ABM Treaty and the persistence with which the allies hold the U.S. to its pledge to observe the four principles codified at Camp David. On the eve of the Geneva Summit, Secretary of State, George Shultz flew to Brussels to reassure the allies of U.S. commitment to observe the restrictive interpretation

of the treaty. The political impact of McFarlane's statement was made clear at the fall meeting of the North Atlantic Assembly. Although a resolution endorsing SDI research passed by a wide margin, it drew an unprecedented number of dissenting votes.[75]

The SDI-Charter agreed on at Camp David did not fully satisfy all NATO allies. West Germany, in particular, stipulated additional conditions before being willing to fully support the U.S. position on the SDI. Initially, the Federal Republic had welcomed the SDI for its promise of a more stable strategic future and for its positive effect on arms control. Officials even endorsed the program on moral grounds. But, beginning in early 1984, they grew more ambivalent. Evidence of this apparent change of policy was first provided by Defense Minister, Manfred Woerner, who expressed fears about SDI's destabilizing impact and its effect on allied security just as the United States made a major appeal for the SDI at the NATO Nuclear Planning Group meeting in April 1984.[76]

German Chancellor Helmut Kohl, in February, 1985, stipulated goals for the arms control talks about to begin at Geneva that deviated from the objectives formulated by the allies in December 1984. He called for a ban on anti-satellite weapons and suggested that a conclusive judgement on missile defense was needed. He then presented the West German considerations for the evaluation of the SDI.

1. A space defense system must consider the strategic unity of the Alliance region.

2. Strategic instabilities, especially during the transitional phase must be avoided.

3. The U.S. Strategic Defense Initiative requires, because of its far reaching consequences specifically for our security, very close and confidential consultations, bilaterally and within the Alliance.

4. Regardless of whether research will lead to the desired goals, the SDI will generate an enormous push in technology innovation. Highly industrialized countries like the Federal Republic and the other European allies must not be decoupled technologically.

5. The American space program is a strong incentive for Soviet willingness to negotiate.[77]

In his speech during the parliamentary debate on the SDI in April 1985, Chancellor Kohl pressed these considerations as specific demands of the federal government. Additionally, he added two strategic demands: (1) NATO's strategy of flexible response must remain valid as long as no other more promising methods have been developed to prevent war; and (2) No new threats below the nuclear threshold must result from the SDI. Chancellor Kohl had essentially revised the SDI-Charter that until then had provided the foundation of the U.S.-allied consensus on the SDI.[78]

The third course of action pursued by the White House to gain allied support of the SDI was a response to Helmut Kohl's concerns regarding the technological and industrial impact of the SDI. It is here that Washington began to use economic incentives and European fears of being left behind technologically to overcome the political and strategic

reservations of the allies. At the Nuclear Planning Group Meeting in Luxembourg in March 1985, U.S. Secretary of Defense, Casper Weinberger, formally presented an invitation to all allies to participate in SDI research. While the offer was welcomed, Mr. Weinberger's demand that the allies declare themselves within 60 days evoked charges of blackmail.[79]

The U.S. attempt at Luxembourg to appease the Europeans by offering commercial incentives has been largely unsuccessful. France and six other NATO allies, including Canada, have rejected Weinberger's invitation, although this does not preclude participation of private industry from these countries. This rejection of formal cooperation on SDI research dealt a major blow to U.S. endeavors to secure broad political endorsement of the SDI.

HIGH TECHNOLOGY

After the SDI announcement, the idea spread throughout Europe, and was particularly prevalent in France, that the SDI's research programs would significantly widen the technology gap between Europe and the United States in a certain number of fields, with important consequences for civilian industry. As one French official said:

> Twenty-six billion dollars will be spent on specific technological sectors which have an important developmental effect on numerous other sectors directly tied to SDI. Much is being said about directed energy weapons; without ignoring

> their importance, and possible civilian applications (such as progress in thermo-nuclear fusion), only 23 percent of SDI credits will be devoted to this sector between now and 1989...on the other hand, over half the expenditure will be made on SDI "eyes" (systems for surveillance, acquisition, pursuit, and strike evaluation) and the "brain" (strike decisions): progress in sensing devices, signal interpretation and artificial intelligence could cause an upheaval in areas as important to the future as microelectronics, computers, and robotics.[80]

In March 1985, the tone of Secretary of Defense, Casper Weinberger's invitation to the Europeans to participate in the SDI reflected such European analyses. Secretary Weinberger later explained:

> Allied countries participating in SDI would accrue benefits to their industrial-technological bases. SDI research also would have significant civilian spin-offs, such as the medical applications of free electron lasers now being investigated by three U.S. medical centers, both in the U.S. and overseas. Technologies developed through SDI research could be useful in European defense and have implications for conventional defenses.[81]

The American offer to participate in the SDI research program spawned a French initiative, the European Research Coordination Agency (EUREKA), which was launched in April 1985. The aim of EUREKA was to establish collaborative research and development projects on a European scale. Many of the technologies involved (for example, high-powered computers, very large-scale integrated circuits, lasers and optronic devices) duplicated areas covered by the SDI. EUREKA, however, has a declared civilian application and focused on projects further up the research and development chain than the SDI, which allowed President Mitterrand to

insist that it was unrelated to any American program. But while many of its objectives were independent of the SDIs, EUREKA, as a French idea, nevertheless, reflected widespread fears that the SDI research program would serve to encourage a brain-drain from Western Europe to the United States, and would, in any case, orient European research efforts in general toward SDI purposes.

The presentation of EUREKA as a method of closing the technology gap between Europe and the United States provided a political benefit to European leaders. The existence of a supposed technology gap permitted European governments, including France, to base their acceptance of their companies' participation in SDI research programs on technological reasons, and to do this without seeming to give political endorsement to the SDI. EUREKA provided another focus for European industrial research without taking away from European companies their capacity to do work related to the SDI.

For the French, EUREKA was a notable diplomatic success. All the European countries supported the French initiative and chose to participate in the program. While EUREKA permitted the participation of European companies in SDI research, however, it left unresolved the framework for this participation and, at a more fundamental level, the benefits that Europe would receive. European business leaders felt

that industrial spin-offs from SDI research could be of considerable economic importance. For example, Giovanni Agnelli, the President of Fiat, stated:

> ...that participation in the U.S. program could have colossal implications not only for Fiat, but for the future of high technology in Europe. Europe is out of most Pentagon programs, but this represents a major opportunity.[82]

A further nontechnological perspective supporting European participation in the SDI research program came from Germany. It argued that participation offered a means of influencing SDI's strategic concepts, thus justifying the establishment of a framework for inter-governmental cooperation. But because European participation in the SDI would probably be limited to clearly specified areas of research, the French, in contrast to the Germans, felt there would be little opportunity to influence the systems overall design and its underlying strategic concepts.

In addition to the limitations identified above, other restrictions imposed by American legislation on technology transfer, as well as the nontransfer clause of the ABM Treaty, added specific obstacles to European participation in the SDI. Furthermore, in December 1985, the American Congress passed a resolution preventing the preferred treatment of foreign contractors in the SDI and requiring that, in case of equal bids, preference be given to American contractors.[83]

By the end of 1985, events seemed to have down played the benefits that Europeans could reasonably expect from participation in the SDI. The British Governmental agreement of research proved not as financially lucrative as some had hoped, and American experts, such as the Federation of American Scientists, were arguing that total European participation in the twenty-six billion dollar SDI program would be between thirty and three hundred million dollars, clearly a very small percentage of the total budget.[84]

It appears, therefore, that the question of European participation in SDI research was only temporarily at the forefront of the Euro-American debate on the SDI. The initial U.S. view that the offer of participation might calm European anxieties about American unilateralism was not shown to be justified, while the full implications of European participation were not fully calculated even by those countries that actually endorsed national industrial involvement. Furthermore, the SDI did not appear to be the appropriate framework for finding a solution to the problem of the transfer of military technology.

THE EUROPEAN STAKE IN STRATEGIC DEFENSE

The defense of Europe has been at the center of American nuclear strategy since 1945. American nuclear deterrence was originally conceived in order to balance unequal conventional strengths in Europe and to defend Europe from the Soviet

threat. European security has always remained the central concern of American doctrine even while American vulnerability to Soviet attack changed the strategic context in so far as strategists had to plan for the retention of a second-strike option. The concepts which successively dominated American doctrine, that is, massive retaliation, flexible response, and the Schlesinger doctrine were formulated to a large extent around the requirements of extended deterrence and as a result of the European situation. It is incorrect to speak of extended deterrence as if the United States had first established limited deterrence of their own territory and then extended it to Western Europe. The enhanced radiation weapon controversy and the intermediate-range nuclear force (INF) dilemma also grew out of American responses to European problems. Extended deterrence was adapted according to changes in technology and the local and global balance of forces.

The SDI grows out of a different logic in so far as it is an American response to an American problem. President Reagan's program gave notice that the United States no longer felt that an equilibrium of offensive forces was the only, or even the best, guarantee of strategic stability. Furthermore, the rhetoric surrounding the SDI indicated that the basis of deterrence, that is, the mutual holding of hostages, did not conform morally to the values at the heart of American society.

Obviously, these are not specifically American problems. But for the Europeans, confronted by a wide range of nuclear, conventional, and chemical threats, the specific danger posed by ballistic missiles is secondary, while for the United States it is primary.

By supporting specific American interests, the SDI is a project which seemingly, should not concern Europe. The United States has attempted to modify the program so that it fits better with Alliance requirements as a whole, but at the political level, this has had minimal results. The SDI has, for the first time, made the question of European security peripheral to the American's perception of their territorial security interest. Some Europeans have argued, in order to explain their perceived change in U.S. policy, that the United States strategic priorities are moving toward the Pacific Basin. Despite the economic importance of the Pacific, Europe remains, by far, the principal strategic area in the world where potential conflict between East and West would have the most devastating effect.

The Pacific Basin argument is not useful to judge American policy and the SDI. In fact, the SDI seems to give strength to General Gallois' twenty-year old argument that the nuclear risk is so great that it can only be managed as a matter of national policy.[85] In other words, the nuclear strategy of a state is defined primarily in terms of its national interest. The Europeans may judge that the SDI does not respond to their interests or they may even judge that it

is based on an incorrect analysis of American interests, but they cannot challenge the Americans' right to define their strategy primarily according to their view of their own security interests. The result is, perhaps, a European sense of powerlessness in the debate that has been carried on with the Americans since 1984.

Europeans were, perhaps, shocked to discover that they were not always to be at the center of American defense planning. Conversely, the Americans had difficulties seeking Alliance approval for a project that had been conceived as a national one. The clarification of American policy on the SDI and of European interests in aspects of it should not produce problems for Alliance unity. The recognition by the allies that the threat they face and the security needs they have are not identical, and the communication of where interests converge or diverge are as natural as they are necessary in a healthy Alliance.

This sort of recognition is also vital for the formulation of a coherent European position on defense policy. In this way, rather than creating divisions among Europeans, the SDI may, perhaps, act as a spur to European unity. As long as American strategy seemed to reflect Alliance priorities, and, thus, responded to the security needs of Europe, greater unity among European members of NATO was not crucial. Once the definition of this strategy is based on American priorities, which no longer necessarily

coincide with those of Europe, there may be room for an authentic European response to European security needs.

In view of European anxieties over strategic defense, it has been deemed almost self-evident that SDI jeopardizes European security and, ultimately, may effect the collapse of NATO. Proponents of this view argue strategic and political reasons to support their gloomy assessment of the impact of SDI on the Alliance. But they rarely question what will happen to NATO and European security if current military trends at the strategic and theater levels go unchecked. They not only consider the present security situation of NATO satisfactory, that is, stable, they also assert that it will not materially change in the future provided strategic defenses are not introduced.

Both assumptions are unsupported by empirical evidence. First, changes in the strategic environment have raised serious questions about the continued relevance of the doctrine of flexible response, which provides the military and political foundation of NATO's security policy. Indeed, the controversy surrounding the INF deployment in Europe demonstrated vividly the extent to which flexible response and its correlative, extended deterrence, have been called into question by the loss of U.S. strategic superiority and the deterioration of the theater nuclear balance in Europe.[86]

Second, NATO's military situation in Europe continues to worsen as a result of the massive Soviet military build-up of both nuclear and conventional weapons in the theater. The

debate in NATO on raising the nuclear threshold should be welcomed, but it may be largely academic, given the apparent lack of political will to marshal the resources necessary to support a viable conventional defense of Europe. And unless NATO takes dramatic measures to improve conventional capabilities, it may even be unable to exercise its theoretical nuclear option according to a recent study by NATO's highest military council.[87]

Strategic defenses can assist NATO in meeting these challenges to its ability to deter Soviet aggression: First, even limited defenses of U.S. land-based missiles will bolster deterrence by reducing Soviet confidence in its ability to achieve its attack objectives. The growing Soviet first-strike potential against U.S. land-based assets is progressively eroding the physical ability of the United States to implement its nuclear pledge to Europe.

Second, U.S. vulnerability to retaliation also stretches the political credibility of the U.S. nuclear commitment to Europe. If SDI can reduce the vulnerability of the United States, this will enhance perceived U.S. willingness to use nuclear weapons under NATO doctrine in response to a Soviet attack. This will bolster allied political solidarity and heightens the risk of nuclear escalation for Soviet planners in any attack scenario involving Europe.

Third, flexible response depends critically on timely and sufficient reinforcements of people and material from the United States. Given the total vulnerability of the United

States to nuclear attacks, even surgical strikes against selected targets in the United States would create havoc, rendering organization of a massive logistical reinforcement effort impossible. Even limited defenses of key installations in the United States will boost NATO's conventional staying power.

Fourth, Soviet leaders are aware that the Soviet Union cannot win a prolonged war against the West because of the inferior Soviet industrial base. Large-scale defense of U.S. industrial assets will thus deny Moscow any reasonable prospect of winning a quick victory or defeating the United States and enhance deterrence.

Fifth, a relatively undamaged U.S. industrial base will also be able to resupply NATO after limited weapons stockpiles have been exhausted. Currently, NATO defenses could well falter for lack of supplies, thus calling into question the wisdom of resisting Soviet attack in the first place.

For these reasons, even the defense of the United States alone will have a positive effect on NATO's security. It would enhance deterrence and bolster NATO's ability to resist aggression in the event of its failure. Even if the Soviet Union acquired strategic defenses, the benefits accruing to NATO from a strategic defense of the U.S. would not diminish significantly.

Europeans are obviously concerned that strategic defenses shielding both superpowers against nuclear attack will undermine deterrence and raise the risk of conflicts

below the strategic nuclear level. These concerns are real in view of the fact the United States would not be able to threaten the Soviet Union to the present extent, but this must be balanced by three other considerations.

First, it is highly speculative whether Washington will, under present circumstances, stand by its nuclear commitment to Europe when put to a test. Reducing the vulnerability of the United States to Soviet retaliation should be in the European interest. While Washington might not be able to inflict unacceptable damage on the Soviet Union, increasing the probability of a U.S. response might well off-set this decline in U.S. strategic capability.

Second, a strengthened conventional posture will raise the nuclear threshold and complicate Soviet planning for blitzkrieg-type offensive operations calculated to effect the rapid collapse of NATO defenses and to sustain the use of tactical nuclear weapons. If confronted with a hopeless military situation, the European governments would probably oppose the use of nuclear weapons. Even if they were willing to authorize nuclear use, the United States might refrain from escalating the conflict to the strategic nuclear level and could desist from using nuclear weapons on the battlefield.

Third, while the benefits and drawbacks of an introduction of strategic defenses are commonly discussed in terms of U.S. first-use, Moscow may force the issue. The Soviet program is sufficiently advanced to enable Moscow to

field a limited BMD system with short warning. Lack of U.S. readiness to match Soviet BMD deployment may actually encourage the Soviets to capitalize on their lead in traditional BMD technology. Even a primitive Soviet BMD system to protect military assets could deny NATO limited nuclear options and diminish the viability of flexible response that INF deployment was meant to preserve

Strategic defenses need not be limited to the territory of both superpowers. Technologies exist or are being developed that could provide a considerable degree of protection against non-ballistic nuclear threats to Europe. Some experts even suggest that development of anti-tactical missile (ATM) defenses to destroy short and medium-range missiles may in fact be easier and become available sooner than effective space-based defenses.[88] Deployment of ATM defenses in Europe offers a number of advantages.

First, such defenses deny Moscow the ability to achieve a decisive military advantage through preemptive attacks against key NATO installations. The Soviet's have an impressive array of nuclear missiles trained on Europe.[89] During the INF deployment debate, opponents often argued the vulnerability of these systems to preemptive Soviet attacks to evoke fears of inviting nuclear attacks and precipitating nuclear war. ATM defenses would lessen the danger of Soviet preemption and increase public acceptance on INF deployment.

Second, reducing Soviet confidence in successful preemption of NATO's nuclear capabilities will enhance

deterrence even if Moscow deployed comparable ATM systems. Preemptive attacks play a critical role in any Soviet attack on NATO, and denying Moscow that ability will greatly constrain her military options against the Alliance.

Third, ATM defenses may also deter limited Soviet attacks on NATO. Any such attacks require the neutralization of NATO's nuclear arsenal in the theater. ATM defenses will reduce Soviet assurance of being able to destroy Alliance nuclear assets. In the absence of such assurance, the risks associated with attack will outweigh possible benefits. ATM defenses can thus deny Moscow confidence in political war termination.

Fourth, NATO airfields, munitions depots, command installations, and port facilities, as well as other fixed and mobile assets, are also vulnerable to a broad array of Soviet nuclear and nonnuclear attack options. Defending these critical assets in the theater will improve NATO's ability to organize and sustain a viable conventional defense. ATM defenses will thus strengthen NATO's ability to deter attack and mount a conventional defense.

CONCLUSION

The review of military strategy that has begun in Western Europe is of historical importance. Ultimately, technology will determine the possibilities of strategic defense, but it is European perceptions of the balance of opportunities and risks that will shape the political fate of SDI in Europe.

With few notable exceptions, European attitudes toward the SDI range from ambivalence and skepticism to outright hostility. It is perfectly legitimate for the allies to question the technological feasibility of the SDI and its ramifications for their security. It is equally legitimate for them to challenge Washington's answers. Indeed, most questions and concerns about the SDI cannot be answered confidently at this stage of the research program.

But European ambivalence toward the SDI reaches far beyond questions of its technical feasibility and strategic impact on their security. It reflects a determined commitment to mutual assured destruction (MAD) as a desirable foundation of security, though the assumptions supporting MAD have been eroding by technological developments or disproved by Soviet strategic force programs and doctrinal pronouncements.

There has been insufficient focus on the strategic implications of the SDI. Thus, a new stage in the Euro-American debate on the SDI is still to come, and this debate

will widen once the United States has an opportunity to evaluate the results of the research program and begins to make decisions about a possible deployment. The need to deal directly with the renewal or cancellation of the ABM Treaty will also affect the nature of the Euro-American debate on the SDI issue.

Generally, the proper management of the Alliance during this period will require the Europeans and the Americans to express clearly their interests in the SDI and the overall strategy of the Alliance. Such a debate will be difficult for the Europeans as it may make them realize that Europe will occupy a progressively less central role in the definition of American strategy. Such a debate will also cause difficulties for the United States, for reasons that have hardly changed since the Alliance's formation. As Henry Kissinger noted in 1965:

> The United States has been slow to admit to itself that real differences of interest between us and our allies are possible...The reluctance to face this conflict of interests has produced what the French call a dialogue among the deaf....Many Europeans opposing American conceptions are not content with acting simply as advisors in an American decision making process; instead they strive for a structure in which they have autonomous responsibility. They want their agreement to represent an act of will, not organizational necessity.[90]

These general percepts could be applied to virtually all transatlantic discussions between the allies.

It is possible that radical disarmament programs such as those proposed by Mikhail Gorbachev in mid-January 1986 will

affect American declaratory policy. The Soviets have reminded the West that the moral condemnation of nuclear weapons and proposals for their total elimination have been a constant line of Soviet propaganda and consistent with Soviet interests since 1945. Massive Soviet conventional superiority gives the Soviet Union a military interest in nuclear disarmament, and perhaps the unexpected convergence between the aims of the SDI and the Gorbachev plan may force the United States to be more reserved in calling for the elimination of nuclear weapons, a goal much more consistent with Soviet, than with West European, strategic desires.

The United States will have to take the initiative to enter into a true strategic dialogue with the Europeans about the implications of an eventual partial deployment of defensive strategic systems. The fact that certain allies may be participating in the SDI program is not enough to calm some of the fears that have been aroused in Europe. Naturally, given that the SDI is only a research program it is difficult to have detailed discussions on its outcome, but the Europeans who have supported the program under American diplomatic pressure will continue to demand further information about the program's implications for European security.

The relationship between defense and deterrence is of vital importance to both the United States and the European allies. The U.S. must take the initiative and encourage the opening of a true debate on the relationship between the SDI

and European security interests. From a purely European perspective, there can only be two positive outcomes of such a discussion. First, if it can be resolved that the SDI will lead to the deployment of a system that solves exclusively American problems, does not provoke the Soviet Union, and has no direct negative impact on European security, then, naturally, the Europeans could have no objection. This is, however, an unlikely outcome given the complex relationship between American and European security interests. If, on the other hand, a deployed SDI system were to strengthen an established policy of flexible response that already has Alliance-wide support, then this would reassure European leaders who are wary of changing the basis of a security system that has worked for over 40 years. Developing a military policy for the SDI that is consistent with established principles will be a European preference. Therefore, the United States, in clarifying the inevitable ambiguities in American planning on the SDI issue, will have to take into account specific European concerns about the survivability of the current NATO strategy, and build strategic defense policies around the consensus that has already been achieved throughout the Alliance.

ENDNOTES

[1] Bernard Brodie, *The Absolute Weapon: Atomic Power and World Order,* (New York: Harcourt, Brace and Company, **1946**), p. 28.

[2] Lawrence Freedman, *The Evolution of Nuclear Strategy,* (London: The MacMillan Press Ltd., **1983**), pp. 158-160.

[3] Ibid., P. 161.

[4] David Barash, *The Arms Race and Nuclear War,* (California: Wadsworth Publishing Company, **1987**), p. 114.

[5] Ibid., p. 115.

[6] Herman Kahn, *On Thermonuclear War,* (New Jersey: Princeton University Press, **1960**), p. 626.

[7] Barash, p. 136.

[8] Leon Wieseltier, "When Deterrence Fails." *Foreign Affairs,* (Spring **1985**), p. 834.

[9] Leon Sloss, "The Strategist's Perspective." *Ballistic Missile Defense,* ed. Ashton B. Carter and David N. Schwartz (Washington, D.C.: The Brookings Institution, **1984**), p. 41.

[10] Ibid., pp. 41-42.

[11] Ibid., pp. 332-333.

[12] Barash, p. 142.

[13] Brian Green, "The New Case For Civil Defense." *The Heritage Foundation Backgrounder.* No. 377, August 29, **1984**, p. 3.

[14] Robert McNamara. *Blundering Into Disaster,* (New York: Pantheon Brooks, **1986**), pp. 19-36.

[15] George W. Rathjens, "The Dynamics of the Arms Race." *Progress in Arms Crontrol?,* Readings from Scientific American (San Francisco: W. H. Freeman and Company, **1979**), pp. 37-43.

[16] Lawrence W. Martin, *Ballistic Missile Defence and the Alliance,* (Paris: Atlantic Institute for International Affairs, **1969**), p. 19.

[17] Rathjens, p. 40.

[18] Kim R. Holms, "While Opposing Reagan's SDI, Moscow Pushes Its Own Star Wars." *The Heritage Foundation Backgrounder.* No. 540, October 21, **1986**, p. 5.

[19] Henry A. Kissinger, *White House Years,* (New York: Little, Brown & Company, **1979**), p. 208.

[20] Ibid.

[21] Holms, p. 6.

[22] David Holloway, *The Soviet Union and the Arms Race,* (London: Yale University Press, **1983**), p. 47.

[23] Ibid., p. 48.

[24] Henry A. Kissinger, "NATO Defense and the Soviet Threat." *Strategic Deterrence in a Changing Environment,* ed. Christoph Bertram (New Jersey: Allenheld, Osmun and Company Publishers, Inc., **1981**), pp 107-111.

[25] Kissinger, *White House Years,* pp. 208-215.

[26] Bruce G. Blair and Bruce M. Russett, "SALT I and Its Background." *Progress in Arms Control?* Readings from Scientific American (San Francisco: W. H. Freeman and Company, **1979**), pp. 28-32.

[27] Freedman, pp. 372-382.

[28] Colin S. Gray, *Nuclear Strategy and National Style,* (Maryland: Hamilton Press, **1986**), p. 216.

[29] Barash, p. 126.

[30] Ibid., p. 127.

[31] Ibid., p. 113.

[32] Ibid., p. 128.

[33] Ibid.

[34] Freedman, pp. 377-395.

[35] Richard Rosencrance, "Stategic Deterrence Reconsidered." *Strategic Deterrence in a Changing Environment,* ed. Christoph Pertram (New Jersey: Allenheld, Osmun and Company Publishers, Inc., **1981**), pp. 23-31.

[36] Randall J. DeValk and Glenn A. Kent, *Strategic Defenses and the Transition to Assured Survival,* (California: The Rand Corporation, **1986**), p. 1.

[37] Ibid.

[38] Craig Snyder, *The Strategic Defense Debate - Can "Star Wars" Make Us Safe?,* (Philadelphia: The University of Pennsylvania Press, **1986**), p. 220.

[39] *Strategic Survey 1984-85,* (London: International Institute for Strategic Studies, **1985**), pp. 12-17.

[40] Edward P. Haley and Jack Merritt, eds., *Strategic Defense Initiative - Folly or Future?,* (London: Westview Press, **1986**), p. 37.

[41] Johan J. Holst and William Schneider, eds., *Why ABM? Policy Issues in the Missile Defense Controversy,* (New York: Pergamon Press, Inc., **1969**), p. 195.

[42] David S. Yost, "Ballistic Missile Defense and the Atlantic Alliance." *International Security,* (Fall **1982**), pp. 143-174.

[43] John Noble Wilford, "Despite 1967 U.S. - Treaty, Drive for Space Weapons Goes on," *New York Times,* March 27, **1983**, p. 1.

[44] Snyder, p. 219.

[45] Christoph Bertram, "Strategic Defense and the Western Alliance." *Strategic Defense Initiative - Folly or Future?* eds. Edward P. Haley and Jack Merritt. (London: Westview Press, **1986**), p. 166.

[46] Manfred R. Hamm, "Strategic Defense and the West German Social Democrats." *Strategic Review,* (Spring **1986**), p. 20.

[47] David S. Yost, *France's Deterrent Posture and Security In Europe,* Adelphi Paper #194, (London: International Institute for Strategic Studies, **1985**), pp. 1-6.

[48] *Soviet Military Power 1987,* (Washington, D.C.: U.S. Government Printing Office, **1987**), p. 24.

[49] "A Patriot for Europe?" *The Economist,* January 12, **1985**, pp. 39-40.

[50] W. Bruce Weinrod, ed., *Arms Control Handbook*, (Washington, D.C.: The Heritage Foundation, **1987**), pp. 13-39.

[51] Manfred R. Hamm, "NATO's Role in Meeting the Soviet Challenge." *Confronting Moscow - An Agenda for the Post Détente Era*, ed. W. Bruce Weinrod, (Washington, D.C.: The Heritage Foundation, **1985**), pp. 19-26.

[52] Quoted by Richard N. Perle in *Political and Military Issues in the Atlantic Alliance*, Hearings, Subcommittee on Europe and the Middle East, Committee on Foreign Affairs, House of Representatives, 98th Congress, 2nd Session, August 1; October 1, **1984**, p. 108.

[53] Johan J. Holst, "Missile Defense: Implications for Europe." *Why ABM? Policy Issues in the Millile Defense Controversy*, eds. Johan J. Holst and William Schneider, Jr. , (New York: Pergamon Press, **1969**), p. 189.

[54] Lawrence W. Martin, p. 30.

[55] Ibid., p. 33.

[56] Fred S. Hoffman, "Ballistic Missile Defenses and U.S. National Security." *Strategic Defense Initiative - Folly or Future?* eds. Edward P. Haley and Jack Merritt, (London: Westview Press, **1986**), pp. 27-35.

[57] Ibid., p. 30.

[58] Barash, pp. 113-114.

[59] Fred C. Iklé, "Nuclear Strategy: Can there be a happy ending?" *Foreign Affairs*, (Spring **1985**), p. 821.

[60] Paul H. Nitze, "The Strategic Concept Behind U.S. Aims in Geneva," *International Herald Tribune*, March 15, **1985**, p. 1.

[61] *Strategic Survey 1984-85*, p. 17.

[62] Snyder, p. 219.

[63] "Woerner Interviewed on Antimissile System," *Foreign Broadcast Information Service (FBIS) - Western Europe*, April 6, **1984**, p. C1.

[64] "Genscher Interviewed on Space Weapons, Control," *Foreign Broadcast Information Service (FBIS)*, Western Europe, May 1, **1984**, p. J2.

65 "The French Position with the Militarization of Space," *LeMonde*, January 10, **1985**, p. 4.

66 William Drozdiak, "Europeans Expected to Pressure for Space Talks After U.S. Election," *The Washington Post*, August 5, **1984**, pp. A19-20.

67 "Mitterrand Discusses Foreign Affairs in Interview," *Foreign Broadcast Information Service (FBIS) - Western Europe*, December 18, **1984**, p. K14.

68 U.K. House of Commons, *Report from the Defence Committee*, (London: May **1984**), p. IX.

69 Bertram, p. 171.

70 Clarence A. Robinson, Jr., "Study Urges Exploiting of Technologies," *Aviation Week and Space Technology*, October 24, **1983**, pp. 50-57.

71 Hoffman, pp. 29-34.

72 Rodney W. Jones and Steven A. Hildreth, "Star Wars: Down to Earth, or Gleam in the Sky?" *Washington Quarterly*, (Fall **1984**), pp. 106 107.

73 Margaret Thatcher, "Press conference." *Strategic Defense Initiative - Folly or Future?* eds. Edward P. Haley and Jack Merritt, (London: Westview Press, **1986**), p. 183.

74 Don Oberdorfer, "ABM Reinterpretation: A Quick Study," *Washington Post*, October 22, **1985**, p. A1.

75 Richard G. O'Lone, "North Atlantic Assembly Declares Support for SDI After Lobbying Effort," *Aviation Week and Space Technology*, October 21, **1985**, pp. 18-21.

76 James M. Markham, "Bonn is Worried by U.S. Arms Research." *New York Times*, April 14, **1984**, p. 3.

77 Helmut Kohl, "Statement to the Bundestag." *Stategic Defense Initiative - Folly or Future?* eds. Edward P. Haley and Jack Merritt, (London: Westview Press, **1986**), pp. 179-82.

78 Ibid.

79 Don Oberdorfer, "Allies Fear Political Impact of Star Wars - Weinberger's 60 Day Partnership Ultimatum Irritates Some Europeans," *Washington Post*, April 1, **1985**, p. A12.

[80] Francois Heisbourg, *LeFigaro*, May 18, **1985**, p. 1.

[81] Caspar Weinberger, "SDI, Realities and Misconceptions," *The Christian Science Monitor*, October 18, **1985**. Reprint.

[82] "Fiat says it wants to compete for work on SDI." *International Herald Tribune*, July 17, **1985**, p. 1.

[83] John Pike, "SDI Contracts: Will U.S. Allies be sold short?" *International Herald Tribune*, January 16, **1985**, p. 2.

[84] Ibid.

[85] Pierre M. Gallois, "SDI: A European View." *Perspectives on Strategic Defense*, eds. Steven W. Guerrier and Wayne C. Thompson, (Boulder: Westview Press, **1987**), pp. 133-141.

[86] Henry A. Kissinger, "The Future of NATO." *NATO: The Next Thirty Years*, ed. Kenneth A. Myers, (Boulder: Westview Press, **1980**), pp. 3-20.

[87] Keith B. Payne, "Strategic Defense and Stability." *Orbis*, (Summer **1984**), pp. 215-226.

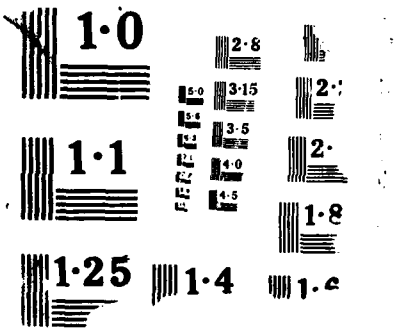
[88] David S. Sorenson, "Ballistic Missile Defense for Europe," *Comparative Strategy*, (Summer **1985**), pp. 159-178.

[89] *Soviet Military Power*, **1987**, pp. 24-25.

[90] Henry A. Kissinger, *The Troubled Partnership*, (New York: McGraw - Hill, **1965**), pp. 21-22.

AD-A195 412 THE STRATEGIC DEFENSE INITIATIVE ISSUES AND IMPLICATIONS FOR THE ATLANTIC ALLIANCE(U) TOTAL ARMY PERSONNEL AGENCY (PROVISIONAL) ALEXANDRIA VA 2/2

UNCLASSIFIED C G DAVIDSON MAY 88 F/G 15/3.1 NL


1·0
1·1
1·25
1·4
2·8
3·15
3·5
4·0
4·5
2·
1·8

SELECTED BIBLIOGRAPHY

BOOKS

Arms Control and the Arms Race. Readings from Scientific American. New York: W.H. Freeman and Company, **1985**.

Barash, David P. *The Arms Race and Nuclear War.* California: Wadsworth Publishing Company, **1987**.

Barnet, Richard J. *Real Security-Restoring American Power in a Dangerous Decade.* New York: Simon and Schuster, **1981**.

Bertram, Christoph. *Strategic Deterrence in a Changing Environment.* New Jersey: Allenheld, Osmun and Co. Publishers, Inc., **1981**.

Betts, Richard K. *Nuclear Blackmail and Nuclear Balance.* Washington, D.C., **1987**.

Boutwell, Jeffrey; Hafner, Donald; Long, Franklin A., eds. *Weapons In Space.* New York: W.W. Norton and Company, Inc., **1986**.

Bova, Ben. *Assured Survival-Putting the Star Wars Defense in Perspective.* Boston: Houghton Mifflin Company, **1984**.

Brodie, Bernard. *Escalation and the Nuclear Option.* New Jersey: Princeton University Press, **1966**.

Brodie, Bernard., ed. *The Absolute Weapon: Atomic Power and World Order.* New York: Harcourt, Brace and Company, **1946**.

Carter, Ashton B. and Schwartz, David N., eds. *Ballistic Missile Defense.* Washington, D.C.: The Brookings Institution, **1984**.

Charles, Daniel. *Nuclear Planning In NATO.* Cambridge: Ballinger Publishing Company, **1987**.

DeValk, Randall J. and Kent, Glenn A. *Strategic Defenses and the Transition to Assured Survival.* California: The Rand Corporation, **1986**.

Ennals, Richard. *Star Wars-A Question of Initiative.* New York: John Wiley and Sons, **1986**.

Freedman, Lawrence. *Arms Control-Management or Reform?* Chatham House Papers 31. London: Routledge and Kegan Paul Ltd., **1986**.

Freedman, Lawrence. *Britain and Nuclear Weapons.* London: The MacMillan Press Ltd., **1980**.

Freedman, Lawrence. *The Evolution Nuclear Strategy.* New York: St. Martin's Press, **1981**.

Gray, Colin S. *Nuclear Strategy and National Style.* Maryland: Hamilton Press, **1986**.

Guerrier, Steven W. and Thompson, Wayne C., eds. *Perspectives on Strategic Defense.* Boulder: Westview Press, **1987**.

Guertner, Gary L. and Snow, Donald M. *The Last Frontier-An Analysis of The Strategic Defense Initiative.* Lexington: D.C. Heath and Company, **1986**.

Haley, Edward P. and Merritt, Jack., eds. *Strategic Defense Initiative-Folly or Future?* London: Westview Press, **1986**.

Haug, C. James., ed. *The Strategic Defense Initiative: An International Perspective.* New York: Columbia University Press, **1987**.

Holloway, David. *The Soviet Union and the Arms Race.* London: Yale University Press, **1983**.

Holst, Johan J. and Schneider, William., eds. *Why ABM? Policy Issues in the Missile Defense Controversy.* New York: Pergamon Press, Inc., **1969**.

Kahn, Herman. *On Thermonuclear War.* New Jersey: Princeton University Press, **1960**.

Kissinger, Henry A. *The Troubled Partnership.* New York: McGraw-Hill, **1965**.

Kissinger, Henry A. *White House Years.* New York: Little, Brown and Company, **1979**.

Krauss, Melvyn. *How NATO Weakens the West.* New York: Simon and Schuster, **1986**.

Kruzel, Joseph., ed. *American Defense Annual 1986-1987.* Lexington: D.C. Heath and Company, **1986**.

Kurzman, Dan. *Day of the Bomb - Countdown to Hiroshima.* New York: McGraw-Hill Book Company, **1986**.

Martin, Lawrence W. *Ballistic Missile Defense and the Alliance.* Paris: Atlantic Institute for International Affairs, **1969**.

McNamara, Robert S. *Blundering into Disaster.* New York: Pantheon Books, **1986**.

Mikheyev, Dimitry. *The Soviet Perspective on the Strategic Defense Initiative.* Washington, D.C.: Pergamon-Brassey's International Defense Publishers, Inc., **1987**.

Myers, Kenneth A., ed. *NATO: The Next Thirty Years.* Boulder: Westview Press, **1980**.

Ogden, Suzanne P. *World Politics 87/88.* Connecticut: The Dushkin Publishing Group, Inc., **1987**.

Pahl, David. *Space Warfare and Strategic Defense.* New York: Bison Books Corp., **1987**.

Pressler, Larry. *Star Wars-The Strategic Defense Initiative Debates in Congress.* New York: Praeger Publishers, **1986**.

Progress in Arms Control? Readings from Scientific American. San Francisco: W.H. Freeman and Company, **1979**.

Snyder, Craig., ed. *The Strategic Defense Debate-Can "Star Wars" Make Us Safe?* Philadelphia: The University of Pennsylvania Press, **1986**.

Soviet Military Power 1987. Washington, D.C.: U.S. Government Printing Office, **1987**.

Stares, Paul B. *The Militarization of Space-U.S. Policy, 1945-84.* New York: Cornell University Press, **1985**.

Strategic Survey 1984-85. London: International Institute for Strategic Studies, **1985**.

Tirman, John, ed. *Empty Promise-The Growing Case Against Star Wars.* Boston: Beacon Press, **1986**.

Vlahos, Michael. *Strategic Defense and the American Ethos-Can the Nuclear World Be Changed?* Boulder: Westview Press, **1986**.

Weinrod, W. Bruce., ed. *Arms Control Handbook.* Washington, D.C.: The Heritage Foundation, **1987**.

Weinrod, W. Bruce., ed. *Assessing Strategic Defense-Six Roundtable Discussions.* Washington, D.C.: The Heritage Foundation, **1985**.

Weinrod, W. Bruce., ed. *Confronting Moscow - An Agenda for the Post Détente Era.* Washington, D.C.: The Heritage Foundation, **1985**.

Yost, David S. *France's Deterrent Posture and Security In Europe*. London: International Institute for Strategic Studies, **1985**.

READINGS AND PERIODICALS

"A Patriot for Europe." *The Economist*. January 12, **1985**, pp. 39-40.

Altfield, Michael F. "Strategic Defense and the Cost-Exchange Ratio." *Strategic Review*. (Fall **1986**): pp. 21-26.

Armstrong, Scott and Grier, Peter. "Star Wars-Will It Work?" *The Christian Science Monitor*. January **1986**, reprint collection.

"As Lenin said." *The Economist*. November 1, **1986**, pp. 13-15.

Ball, George W. "The War for Star Wars." *The New York Review*. April 11, **1985**, pp. 38-44.

Bertram, Christoph. "Europe's Security Dilemmas." Foreign Affairs. (Summer **1987**): pp. 942-957.

Bethell, Tom. "Losing Ground in Europe." *National Review*. December 19, **1986**, pp. 32-36.

Betts, Richard K. "Compound Deterrence vs. No-First-Use: What's Wrong Is What's Right." *Orbis*. (Winter **1985**): pp. 697-718.

"Big idea, little future: Europe eyes own defenses.: *U.S. News and World Report*. July 20, **1987**, p. 36.

Brookhiser, Richard. "The Fulda GAP." *National Review*. December 19, **1986**, pp. 37-40.

Bunn, Matthew and Rubin, James P. "Administration Folly over the ABM Treaty." *The Christian Science Monitor*. April 9, **1987**, p. 15.

Chayes, Antonia Handler. "Constitutional Drama." *The Christian Science Monitor*. May 18, **1987**, p. 13.

Cimbala, Stephen J. "Soviet 'Blitzkrieg' in Europe: The Abiding Nuclear Dimension." *Strategic Review*. (Summer **1986**): pp. 67-75.

Clausen, Peter A. "SDI In Search of a Mission." *World Policy Journal*. (Spring **1985**): pp. 249-269.

Cornwell, Rupert. "Eureka: Europe's Answer to SDI." *Europe*. Jan/Feb **1986**): pp. 26-27.

Crozier, Brian. "A European Deterrent." *National Review.* July 31, **1987**, p. 24.

Denton James S. and Schweizer, Peter. "Murdering SDI." *National Review.* July 31, **1987**, pp. 37-39.

DeMedici, Maurino. "Europe Sees the SDI as Two-Edged Sword." *Europe.* (Jul/Aug **1985**): pp. 10-11.

deMontbrial, Thierry. "The European Dimension." *Foreign Affairs-America and the World 1985.* pp. 499-514.

Drozdiak, William. "Europeans Expected to Pressure for Space Talks After U.S. Election." *The Washington Post.* (August 5, **1984**): pp. A19-20.

"Europe's braver colours." *The Economist.* July 11, **1987**, pp. 11-12.

"Europe's spectre." *The Economist.* April 25, **1987**, pp. 11-12.

Evans, Stanton M. "The Common Sense of SDI." *National Review.* December 31, **1986**, pp. 32-35.

"Fiat says it wants to compete for work on SDI." *International Herald Tribune.* (July 17, **1985**), p. 1.

Frelk, James and Jastrow, Robert. "Emasculating America's Deterrent." *Policy Review.* (Summer **1987**): pp. 30-36.

Garritz, Patrick J. "Why We Need Nuclear Weapons." *Policy Review.* (Winter **1985**): pp. 36-45.

"Genscher Interviewed on Space Weapons, Control." *Foreign Broadcast Information Service (FBIS) - Western Europe.* (May 1, **1984**): p. J2.

Gray, Colin S. "Nuclear Delusions." *Policy Review.* (Summer **1986**): pp. 48-53.

Green, Brian. "The New Case For Civil Defense." *The Heritage Foundation Backgrounder.* No. 377, August 29, **1984**.

Haig, Alexander M. Jr. "The Future of Deterrence." *The Heritage Lectures #92.* February 19, **1987**, pp. 1-9.

Hamm, Manfred R. "Strategic Defense and the West German Social Democrats." *Strategic Review.* (Spring **1986**): pp. 16-26.

"Hard luck, try again." *The Economist.* October 18, **1986**, pp. 9-10.

Haseler, Stephen. "Walking Out on NATO." *Policy Review.* (Spring **1987**): pp. 62-66.

Heisbourg, Francois. *LeFigaro.* (May 18, **1985**), p. 1.

Holms, Kim R. "While Opposing Reagan's SDI, Moscow Pushes Its Own Star Wars." *The Heritage Foundation Backgrounder.* No. 540, October 21, **1986.**

Hunter, Robert E. "Of Euromissiles and Eurojitters." *The Christian Science Monitor.* May 13, **1987**, p. 15.

"If NATO became WETO." *The Economist.* March 21, **1987**, pp. 61-63.

Iklé, Fred C. "Nuclear Strategy: Can there be a happy ending?" *Foreign Affairs.* (Spring **1985**), p. 821.

"It gave peace a chance." *The Economist.* March 7, **1987**, pp. 11-12.

Jones, Rodney W. and Hildreth, Steven A. "Star Wars: Down to Earth, or Gleam in the Sky?" *Washington Quarterly.* (Fall **1984**): pp. 106-107.

Kemp, Jack. "The Politics of SDI." *National Review.* December 31, **1986**, pp. 28-31.

Knorr, Klaus. "Burden-Sharing In NATO: Aspects of U.S. Policy." *Orbis.* (Fall **1985**): pp. 517-536.

"Make up your mind, Europe." *The Economist.* May 2, **1987**, pp. 47-48.

Markham, James M. "Bonn is Worried by U.S. Arms Research." *New York Times.* (April 14, **1984**), p. 3.

McNamara, Robert S. "Blundering Into Disaster: The First Century of the Nuclear Age." *The Brookings Review.* (Spring **1987**): pp. 3-9.

Newhouse, John. "Europe and Star Wars." *The New Yorker.* July 22,**1985**, pp. 37-54.

"Nice knowing ya." *The Economist.* March 14, **1987**, pp. 11-12.

Nitze, Paul H. "SDI: Will We Be More Secure In the Year 2010?" *The Atlantic Quarterly.* (Fall **1986**): pp. 179-217.

Nitze, Paul H. "The Strategic Concept Behind U.S. Arms in Geneva." *International Herald Tribune.* (March 15, **1985**), p. 1.

"Nunn's the word." *The Economist.* March 21, **1987**, pp. 21-22.

Oberdorfer, Don. "ABM Reinterpretation: A Quick Study." *Washington Post.* (October 22, **1985**): p. A1.

Oberdorfer, Don. "Allies Fear Political Impact of Star Wars - Weinberger's 60 Day Partnership Ultimatum Irritates Some Europeans." *Washington Post.* (April 1, **1985**): p. A12.

O'Lone, Richard G. "North Atlantic Assembly Declares Support for SDI After Lobbying Effort." *Aviation Week and Space Technology.* (October 21, **1985**): pp. 18-21.

Payne, Keith B. "Strategic Defense and Stability." *Orbis.* (Summer **1984**): pp. 215-216.

Pike, John. "SDI Contracts: Will U.S. Allies be sold short?" *International Herald Tribune*, p. 2. (January 16, **1985**).

Political and Military Issues in the Atlantic Alliance. Hearings, Subcommittee on Europe and the Middle East, Committee on Foreign Affairs, House of Representatives, 98th Congress, 2nd Session, (August 1; October 1, **1984**): p. 108.

Pond, Elizabeth. "Europe: America's pillar or rival in NATO?" *The Christian Science Monitor.* July 31, **1987**, pp. 18-19.

Pond, Elizabeth. "France and West Germany: the odd couple." *The Christian Science Monitor.* July 29, **1987**, pp. 14-15.

Pond, Elizabeth. "Pushed into cooperation." *The Christian Science Monitor.* July 28, **1987**, pp. 16-17.

Pond, Elizabeth. "Will the rest of Europe join in?" *The Christian Science Monitor.* July 30, **1987**, pp. 16-17.

Radway, Laurence. "Let Europe Be Europe." *World Policy Journal.* (Fall **1983**): pp. 23-43.

Rivkin, David B., Jr. "SDI: Strategic Reality or Never-Never Land?" *Strategic Review.* (Summer **1987**): pp. 43-54.

Robinson, Clarence A., Jr. "Is Strategic Defense Criticism Obsolete?" *Policy Review.* (Summer **1986**): pp. 16-23.

Robinson, Clarence A., Jr. "Study Urges Exploiting of Technologies." *Aviation Week and Space Technology.* (October 24, **1983**): pp. 50-57.

Rowny, Edward A. "Moscow and Washington: building a safer world." *The Christian Science Monitor.* May 8, **1987**, p. 14.

Rubin, Alfred P. "The theology of arms control-and U.S. politics." *The Christian Science Monitor.* June 2, **1987**, p. 15.

Sorenson, David S. "Ballistic Missile Defense for Europe." *Comparative Strategy.* (Summer **1985**): pp. 159-178.

Steinbrunner, John D. "The Principles of Defensive Deterrence." *The Brookings Review.* (Summer **1987**): pp. 22-28.

Teller, Edward. "Scientists and National Defense." *Policy Review.* (Winter **1987**): pp. 18-23.

"The European Defense Initiative." *National Security Record.* (February **1986**): pp. 1-3.

U.K. House of Commons. *Report from the Defence Committee.* London: (May **1984**): p. IX.

Weinberger, Casper W. "SDI, Realities and Misconceptions. *The Christian Science Monitor.* (October 18, **1985**), Reprint.

Weinberger, Casper W. "U.S. Defense Strategy." *Foreign Affairs.* (Spring **1986**): pp. 675-697.

Weiseltier, Leon. "When Deterrence Fails." *Foreign Affairs.* (Spring **1985**): pp. 827-847.

Wilford, John Noble. "Despite 1967 U.S. - Treaty, Drive for Space Weapons Goes On." *New York Times.* (March 27, **1983**): p. 1.

Wilson, Pete. "A Missile Defense for NATO: We Must Respond to the Challenge." *Strategic Review.* (Spring **1986**): pp. 9-15.

"Woerner Interviewed on Antimissile System." *Foreign Broadcast Information Service (FBIS) - Western Europe.* (April 6, **1984**): p. C1.

Woerner, Manfred. "A Missile Defense for NATO Europe." *Strategic Review.* (Winter **1986**): pp. 13-20.

Worden, Simon P. "What Can We Do? When Can We Do It?" *National Review.* December 31, **1986**, pp. 36-40.

U.S. Department of State. *The Strategic Defense Initiative.* Special Report No. 129, June **1985**.

Yost, David S. "Ballistic Missile Defense and the Atlantic Alliance." *International Security.* (Fall **1982**).

Yost, David S. "Soviet Ballistic Missile Defense and NATO." *Orbis.* (Summer **1985**): pp. 281-292.

VITA

NAME: *Charles Gordon Davidson*

DATE/PLACE OF BIRTH: *15 February 1947/Detroit, Michigan*

CIVILIAN SCHOOLING: *BS, Michigan State University, 1970*

MILITARY SCHOOLING:

German Basic Course
Defense Language Institute
Monterey, California

Foreign Area Officer Course
United States Army
John F. Kennedy Special Warfare Center
Fort Bragg, North Carolina

Command and General Staff College
(Non-Resident)
Fort Levenworth, Kansas

Engineer Officer Basic and
Advanced Courses
Fort Belvoir, Virginia

PROFESSIONAL STATUS: *Major, United States Army,*
Corps of Engineers

END
DATED
FILM
8-88
DTIC